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THE MEDICAL JOURNAL OF AUSTRALIA.

VOL. II.—4TH YEAR. SYDNEY: SATURDAY, SEPTEMBER 15, 1917. No. 11.

PRELIMINARY REPORT ON ANKYLOSTOMIASIS IN PAPUA.

By J. H. Waite, M.D.,
International Health Board, The Rockefeller Foundation.

Previous Work.

In 1912 and 1913 Dr. Anton Breinl, Director of the Australian Institute of Tropical Medicine, while investigating diseases peculiar to Papua, found a prevalent and pronounced eosinophilia, scarcely to be accounted for by the existing scabies or the varieties of tinea. Eighty-nine, or 57%, of 154 blood smears showed over 10% of eosinophile cells, while, of these, 20 smears contained over 20%, and one smear showed 42% of this type of cell. In light of the present report, some of this increase in eosinophile cells may be due to forms of intestinal helminthiasis.

In 1915 Dr. W. M. Strong, Special Medical Officer, Papua, found hookworm ova in the stools of 50 of 100 native hospital patients at Port Moresby, and a higher percentage in prisoners. He also recovered *Necator americanus* from a native at autopsy.

Present Campaign.

Upon the invitation of the Australian Commonwealth Government, the International Health Board has undertaken an ankylostomiasis survey and treatment campaign in its territory. The first work was begun in Papua on June 1, 1917, with an improvized outfit kindly furnished by Dr. Strong, owing to the failure of scientific supplies to arrive from America. The work to date has been limited to villages and plantations of the Central Division.

Extent of Infection.

Eight per cent. of village natives and 65% of plantation natives have shown ankylostomiasis infection, giving a total infection of 55%, or 463 out of 846 natives examined. The following table reflects the findings:—

	Examined.	Strongyl.	Trichuris.	Ascaris.	Ankylostoma.	Ankylostoma. %
Plantation Labourers ..	538	4	27	34	351	65
Village Natives	158	1	11	4	14	8
Miscellaneous .	150	0	18	25	98	65
Total	846	5	56	63	463	55

The 538 plantation labourers were examined from five representative plantations, and the results are shown in the accompanying table:—

Plantation.	Product.	Examined.	Strongyl.	Trichuris.	Ascaris.	Ankylostoma.	Ankylostoma. %
Bomana ..	Hemp	149	1	11	15	108	72
Kanosia ..	Rubber	139	1	4	3	90	65
Galley Reach	Rubber	92	0	3	0	63	69
Lolorua ..	Rubber	71	1	2	10	43	60
Katea	Tobacco	87	1	7	6	47	53
Total		538	4	27	34	351	65

Each of the 158 village natives in the accompanying table gave a definite history of never having worked on plantations:—

Village.		Examined.	Strongyl.	Trichuris.	Ascaris.	Ankylostoma.	Ankylostoma. %
Poreporena..	Men	44	1	3	1	5	11
	Women	16	0	0	0	0	0
	Children	21	0	0	0	0	0
	Total	81	1	3	1	5	8
Gaile	Men	12	0	0	0	1	8
Hula & Kila-Kila	Men	11	0	3	0	0	0
Wanegella ..	Men	22	0	2	2	6	27
Miscellane'us	Men	32	0	3	1	2	6
Total		158	1	11	4	14	8

The third group, denominated "miscellaneous," embraces hospital patients and travellers who have in the past either visited or worked on plantations. The infection in this group is practically plantation percentage.

Severity of Infection.

(1) Anæmia as an index of severity. One hundred and four hæmoglobin tests by the Tallqvist scale were taken at random from infected plantation natives, with a resulting average percentage of 69%, and with maximum of 85% and minimum of 50%. Other causes of anæmia production in the Papuan native do exist, such as improper food, tuberculosis and malaria. From 245 blood smears taken from natives in 1913, Dr. Breinl demonstrated malarial parasites in 132; 48 malignant tertian, 34 simple tertian, 27 quartan, and 23 of an unidentified type. It is highly improbable that the average hæmoglobin would be reduced 31% by any of these agencies without the aid of the ankylostoma.

(2) Eosinophile cells. The average count in infected cases ranges from 6% to 28%.

(3) Emaciation and chronic ulcers are commonly met with on plantations. Geophagy is described sporadically. In many cases of indisposition to manual labour the men are excused on the ground that the Papuan is not accustomed to work.

Of the 153 infected natives on the Galley Reach and Kanosia estates, 15 were without symptoms, and showed hæmoglobin over 80%, 122 showed slight symptoms, with hæmoglobin from 65% to 80%, and 16 showed severe symptoms, emaciation, and hæmo-

globin under 65%. Thus severe disease is present in 10%, moderate ankylostomiasis in 80%, and an absence of symptoms in 10%, or stated otherwise 10% are worm carriers only, while 90% are worm sick.

Varieties of Parasites.

Both species of human hookworm have been recovered after treatment, *Necator americanus* predominating over *Ankylostoma duodenale*. Other round worms noted to be present are:—

Ascaris lumbricoides in 7% of all cases examined
Trichuris trichiura in 6% of all cases examined.
Strongyloides stercoralis in ½% of all cases examined.

So far neither *Cestode* nor *Trematode* ova have been found in the stools.

Dissemination of Ankylostomiasis in Papua.

Examination has been made only of the coastal village natives of the Central Division. Of 158 natives who have never worked on any plantation, there appears 8% of ankylostomiasis infection. The houses in these villages are grouped on the sand beach, being built high over the tidal water on numerous piles. Connected with small groups of dwellings by means of a crude bridge there is likewise set on piles a small latrine house, far out beyond the low tide line. Occasionally the native holds to the custom of his forefathers by using a hole cut in the floor of his dwelling for latrine purposes. In either case this method of disposal of excrement probably does not spread hookworm disease, as the young larvæ would be killed by the sea water (Oliver) in 37 minutes of exposure to it. The infecting stage would never be reached. At any rate, no infection has been found to date among women and children, in spite of the fact that infected men are living in the villages. Inland villages have not been visited, but they are described as being decidedly insanitary.

The infection on the plantations is eight times as great as village infection—65% against 8%. The latrine provisions on Papuan plantations are inadequate and little used, with the result that the surface soil is constantly polluted. Furthermore, the cover crops, *Passiflora* and sweet potatoes, used to smother weeds, provide an ideal condition of shade and moisture for hatching of hookworm eggs, and the development of young larvæ to the infecting stage. Inasmuch as all the natives go barefooted, the young larvæ are given plenty of opportunities to complete their life cycle. Proof of this fact is shown in the following table:—

	Previous Service.			New Recruits.		
	Examined.	Infected.	Perc'nt'ge Infected.	Examined.	Infected.	Perc'nt'ge Infected.
Bomana	106	91	85	43	17	40
Kanosia	49	44	89	61	32	52
Galley Reach ..	44	36	81	48	27	56
Lolorua	40	33	82	31	10	32
Katea	28	25	85	34	9	25
Kanosia (mines)	29	13	42			
Katea (mines) ..	24	16	66			
Total—						
Plantation .	268	229	85	217	95	43
Mines	53	29	54			

Thus it will be seen that twice as much infection exists among natives who have served on some other plantation as among those who are serving on their first plantation—85% as compared with 43%. Previous servants in mines show 54% of infection, but no report on the sanitary condition of mines can be made at this time, as no mines have been visited to date. The above figures show a variation in infection among experienced labour of only four points from the mean, while the variation among new recruits on the same plantations ranges from thirteen to eighteen points from the mean. In an effort to explain this great variation in new recruits, all natives serving their first indenture period on the Bomana, Katea, Kanosia and Galley Reach estates were grouped according to the length of time served, which also represents the length of exposure to infective soil. The following table sets forth the findings:—

	Serving under 2½ months.			2½ to 9 months.			9 to 15 months.		
	Examined.	Infected.	Infected. %	Examined.	Infected.	Infected. %	Examined.	Infected.	Infected. %
Bomana ..	24	5	20	8	3	38	12	9	75
Kanosia ..	11	0	0	42	26	61	8	6	75
Galley Reach	9	2	22	22	13	60	17	12	70
Katea	21	2	10	11	5	45			
Total ..	65	9	13	83	47	56	37	27	73

Of those serving under 2½ months, or 70 days, only 13% show infection, while nine months' service multiplies infection by four, and fifteen months' service by six. Looss states that it requires 72 days from the time the larvæ penetrate the skin until they mature and ovulate within the intestine; consequently, our first group, "serving 2½ months," represents those natives, fresh from villages, who come infected to their first plantation. The other groups signify the additional infection acquired on the plantation. In other words, natives, newly recruited, come to a plantation with practically village infection (8%), where they are promptly parasitized in increasing ratio relative to the time spent thereon. The point of importance from the standpoint of dissemination of ankylostomiasis is that these highly infected natives at the close of their contract of service return to their native villages, the majority of which favour the propagation of the disease, being decidedly unlike the villages so far visited in sanitary matters. Thus the villages will constantly be raised from a low level of infection to the higher infection level of the plantation, until high grade infection is uniformly prevalent through Papua.

The Eradication of Ankylostomiasis from Papua.

Eradication of this disease from Papua is possible by concerted action, more easily if undertaken promptly, and with more difficulty the longer it is left to spread about unhindered. The methods of attack are:—

(1) The prevention of soil pollution on the plantations and in the villages. Some adequate latrine system should be put to immediate use on the plantations, the present foci of infection, where every condition favours the dissemination of the disease. One pit latrine should be supplied for every 70 acres, in

order that they be accessible to all natives from any part of the plantation. The best method of disposal of excrement in the villages will have to be studied to suit the particular village in question.

(2) Treatment to a cure of all cases and carriers, having been carried out in other countries, can be repeated in Papua. The direction of treatment should be in the hands of a properly qualified medical practitioner, and cures should be determined by a proper microscopic examination of the stool.

(3) Educate the natives with regard to the nature of this disease, in order to make them realize the dangers of soil pollution.

THE CLINICAL TREATMENT OF SYPHILIS IN THE AUSTRALIAN ARMY.[1]

By **H. Hunter Griffith, M.B., Ch.B. (Melb.),**
Medical Officer, Lytton Camp, Queensland;
Captain, Army Medical Corps, Australian Imperial Force.

(*Continued from page* 201.)

Theory of Treatment.

In the treatment of syphilis, I always bear in mind, as the basis of my treatment, the fact that the early intensive method of treatment gives the most satisfactory and speedy results, and achieves the desirable object of fitting the soldier for active service in as short a period of time as possible. This presupposes tolerance on the part of patients for such treatment.

Rationale of Treatment—Drug Actions and Reactions.

Intravenous Medication.

When I first started out to treat syphilis in the Army I had, I suppose, the popular idea that, so long as one poured in mercury and the arseno-benzol drugs, everything would eventually work out satisfactorily for the patients, as well as for the generous country which was adding to her already enormous burden of debt the very heavy expense necessary to establish and equip venereal diseases compounds in each military district. Any illusions which I might have had with regard to the arseno-benzol drugs were rudely shattered. I found at once a drug which, apart from its very real and specific action on the syphilitic lesions, produced in almost every case a most marked and often alarming reaction, even when given in small doses. In many cases the reaction was so severe and distressing that, at last, I was forced to the conclusion, unless I could obviate this aftermath, I would have to discontinue the use of the preparation altogether. I found it increasingly difficult to persuade patients to submit themselves to the drug, especially if they had already been through one experience of it.

On enquiry from other practitioners who were using the particular arseno-benzol (Billon) which I was using, my own experience was fully borne out. In one particular case even more so, as a number of deaths had followed its administration, and this particular preparation was discarded altogether as being unsafe. When death follows the administration of a drug and the possibility of extrinsic causes can be safely eliminated, as for example, imperfect asepsis, then it is only natural that one should be wary with regard to any further use of that particular drug. But in my case, I appreciated the fact that this preparation, when tolerated by the patient, apparently gave very good results in the treatment of syphilis, so I resolved to persevere with it, though more cautiously.

"Necessity being ever the mother of invention," I set to work and carried out experiments in order to devise some scheme of treatment which, while being as intensive in its specific action as possible, would at the same time cause a minimum of discomfort to the patients submitted to it.

Whether the reaction is due to the parasitotropic action of the arsenic, by which endotoxins are liberated into the circulation on the death of the spirochaetes, or whether it is due to its organotropic action, I am not prepared to say. Probably both factors are involved, with perhaps the onus more on the organotropic than the parasitotropic action of the arsenic, my deduction being based on the fact that my experiments were evolved with the idea of assisting and, if possible, hastening, the elimination of the arsenic liberated in the system after the intravenous injection of the arseno-benzol drugs.

I first of all tried rest in bed and light diet prior to the injection, with further rest in bed following the injection, but, although this helped a little towards reducing the reaction, no material advantage was gained. At this stage only half doses were used, and very particular care was taken, when preparing the drug for injection to follow out implicitly the instructions accompanying the drug. The conditions of asepsis were naturally not what one would obtain in a public hospital or elsewhere, and, although imperfect, all possible and reasonable precautions were observed in order to prevent any errors creeping in. The distilled water and normal soda and saline solutions had to be taken on trust, these being supplied from the Base Medical Stores. All instruments, glassware, etc., were dry sterilized, including the intravenous apparatus, which was the one in use for injections by the gravity method. I mention these particulars in order to point out the avenues through which it was possible for errors to creep in. Looking back now I feel confident that practically the whole of the reaction was due to the drug itself, and not to any extrinsic cause.

Turning the whole subject over in my mind, it appeared to me that the patient who was likely to suffer the least discomfort after the injection of arseno-benzol was the one whose powers of elimination for arsenic were in the best working order, provided of course that no pre-existing idiosyncrasy for arsenic was present. If this were so, I reasoned, then why could not the discomfort and danger consequent on the injection of arseno-benzol be still further minimized by stimulating and increasing those powers of elimination? And it was on this foundation of reasoning and experiment that I worked out my present methods of

[1] Read at a Meeting of the Queensland Branch of the British Medical Association on August 3, 1917.

routine treatment, in which the reaction to the drug is almost negligible, and any risk attendant on its administration is apparently practically eliminated.

In my earlier experiments I considered it necessary to test the patient's urine before submitting him to arsenical medication, but I do so no longer, as I have found it unnecessary.

The avenues by which the arsenic is excreted from the body are, in order of importance, the renal, gastro-intestinal and salivary glands, and, to a lesser extent, the skin. The first two are the most important, although the salivary glands are not far behind on account of the action which the mercury and arsenic have on the mouth, especially when oral septic conditions, with consequent salivation, are present prior to the initiation of treatment.

The only preparation which I give patients prior to injection, as I have already mentioned in my outline of treatment, is the stock mixture (Mistura Z. Coy.), which they are put on as soon as they enter the Compound, and on the night preceding the injection they are given 0.18 gm. of calomel, followed by a dose of *haustus domesticus albus* on the following morning and a light breakfast of a cup of tea and some bread and butter, the purpose of this preparation being to cleanse the gastro-intestinal track and to cleanse and stimulate the renal glands to increased activity. The gastro-intestinal clearance, together with the diuretic action of the soluble citrates, produces the desired effect at one and the same time of removing any existing toxins from the system, as well as clearing the way, as it were, for the elimination of the arsenic, thus materially assisting in the process.

This course of preparatory treatment probably assists also in the elimination from the body of the syphilitic endotoxins, which are set free in the system by the parasitotropic action of the arsenic.

Before I devised my present scheme of routine treatment, I lost one patient as a result of the arseno-benzol, and in several others the subsequent reaction and shock, even to collapse, were so disturbing to myself as well as the patients, that I was practically forced either to improve the methods of treatment, with a view to eliminating or minimizing the after effects, or else to discard the arseno-benzol series of drugs from my armamentarium altogether. Fortunately this latter course was not necessary, and, since the inception of the routine treatment, as outlined in this paper, I have not had the slightest cause for alarm in the use of this preparation, and moreover, I can make my treatment more intensive from the outset, without in any way being severe on the patients, and from this aspect the results of treatment have improved considerably.

The great danger of my earlier methods of treatment was the very real one of an accumulative action of the arsenic from successive doses, more especially on the vital renal tissues, and it was necessary as a routine to test the urine subsequent to an injection in order to determine when all the arsenic had been eliminated from the system, and then to allow three or four days' complete rest from treatment before submitting the patient to a further injection. In plain language it was necessary to eliminate all the arsenic after one injection and to intervene a period of rest before giving the next injection. Urine tests showed that all traces of arsenic disappeared from the urine in from five to eight days after injection, the time taken depending, I suppose, on the relative eliminative powers of the patients and on the size of the dose given. I have discontinued testing the urine for arsenic subsequent to injection, as I find it quite unnecessary. Full doses can now be given at weekly intervals, almost with impunity, without unduly distressing the patients, and furthermore there is no trouble in getting patients to submit to the treatment.

I have not had one refusal to undergo the treatment which I have ordered.

The reactions to the intravenous arsenical medication are many and varied. In the early period of my experience with these drugs, the reactions varied from rigors and slight rises of temperature up to collapse and, in the one case I mentioned, even death. But on further experience the reactions consequent on this medication have been reduced practically to a minimum. Provided a patient follows out my instructions implicity, as previously explained, he should experience no actual discomfort, apart from slight rigors, mild attacks of pyrexia, and perhaps headache. If he has neglected to clear his bowels and to take his "Z. Coy." mixture regularly, and on top of this has had a big meal prior to the injection, then he may have a gastro-intestinal reaction, with vomiting and diarrhœa, and a severe headache to follow. But they soon become educated up to the routine, with the result that very little inconvenience and discomfort is suffered in consequence, and they quickly recover from any slight reaction that may follow the use of the drug.

Herpes is a fairly constant aftermath of the arsenical treatment, but not nearly so common as before the introduction of the "Z. Coy." mixture into the routine treatment. It appears on the lips, cheeks, and neck most commonly, but I have also seen it on the ears, chest, arms, back and abdomen. It causes no inconvenience and rapidly disappears on local treatment with zinc ointment.

Oral asepsis is a very important factor in the clinical treatment of syphilis. A patient with sound teeth and a dentally clean mouth has practically no oral reaction from arsenical and mercurial medication.

The arsenic has a very noticeable and devitalizing action on the gums and oral mucosa generally, more especially if there be any pre-existent conditions of oral or dental sepsis present with consequent salivation. The salivary gland is one of the first avenues through which arsenic is excreted from the system after an intravenous injection, if salivation be going on, and arsenic can be detected in the saliva within an hour or two of the injection.

In my experience, the arsenic has a more powerful action on the mouth than mercury, and, on account of the fact that the two drugs are so popularly used in combination by syphilologists in the treatment of syphilis, the combined effect on the mouth must be much greater than if they were not so used. Hence the dentist must come very much into the picture as a valuable and indispensable assistant. A thorough and searching dental inspection, with suitable treatment when indicated, I regard as a necessity before submitting a patient to a course of arsenical and mercurial medication, if the patient is to avoid some of the oral conditions which I have had to deal with, as a consequence of, at times, a total lack of any dental assistance whatever. In my experience, prior to the installation of a dentist in the camp, oral septic conditions responded very well to local treatment with chromic acid, varying in strength up to 10%, the chromic acid acting apparently both as a bactericide and also as a stimulant to the repair of the oral mucosa.

Mercurial Medication.

Mercury is of course the basis of all anti-syphilitic treatment, and it can be given in a multiplicity of preparations. Pills and ointments are the most popular on account of the ease with which they are obtainable, and can be carried about by the patient.

The preparation which I prefer above all others, although it is difficult to obtain in a well compounded form, is grey oil. I have also used Adam's Cream, but it was not so satisfactory on account of the fact that the mercury had not been triturated up into a fine enough state for suspension in the medium, and the amount of mercury used in each injection varied in consequence, so that one patient would get more than the prescribed amount, while another would get less, and so on.

The ideal treatment for syphilis is the judicious combination of mercury and arsenic, and the more intensive this treatment can be made, without, of course, endangering the general health of the patient, the better will be the response to the treatment on the part of the syphilitic process. The main thing to guard against is any over use of the drug, as indicated by the onset of mercurialism.

The use of the mercury can be pushed to the limits, as long as a patient can withstand it, but the syphilologist must be ever on his guard for signs of mercurialism; and, as soon as this condition arises, all mercurial treatment must be suspended in favour of palliative measures. As with many other drugs, some patients can bear mercury better than others. The different arsenical preparations are most useful in the treatment of syphilis, especially when initiating treatment, on account of the much quicker action of the arsenic as compared with mercury in its spirillocidal action. But mercury still is, as it always has been, our sheet anchor in the treatment of syphilis.

The form of treatment, which I present to each syphilitic patient on his discharge from the compound back to the lines, was devised by me with the idea of impressing on him, and keeping constantly before his mind, the fact that, although all signs of the disease had disappeared, and his blood test was negative, he was not yet cured, and secondly, to make it easier for him to continue treatment for the period considered necessary to give him every chance of attaining that desirable end.

Using my own judgement in the matter, I feel sure that a great majority of these men are anxious to be cured and, provided they do not have to make the supreme sacrifice, will, as far as it lies in their power, carry out the directions for treatment which I have outlined for them.

The three years' course was divided into nine periods of four months each in order that, while the patient through this means will be practically on constant treatment for the whole term, he would obtain frequent and necessary short periods of rest at definite intervals. By this disposition of the different periods the liability to abuse of the mercurial treatment is more or less obviated, and also the rest in between will serve to fit him for the oncoming period of treatment, helped, of course, very materially by the mixture of iodides and citrates during the second month of rest.

I also advise the patient to be periodically examined and to have his blood subjected to the Wassermann test at definite periods, say for instance at the end of every second period of rest, and just prior to commencing the next period of active treatment.

I shall be extremely interested to meet these patients once more, if I can hope to be so fortunate, at least those of them who may be spared to come through the present world-wide struggle.

The Iodides.

In former times one was taught that iodides were only of use in the later stages of syphilis, but I have come to regard them as most necessary and practically indispensable in all stages. They are the only drugs which appear to have any direct influence on fibrous tissue, and, the syphilitic process being essentially a chronic inflammatory one at any stage of its activity, it necessarily follows that the aftermath of the lesions, wherever they be situated, will be of the nature of a fibrosis. These fibrotic changes, when situated in vital organs, may give rise to a multiplicity of complications, depending, of course, on the organ attacked, on account of the inherent tendency of the fibrous tissue to contract and so spoil any vital tissue with which it may become intermingled. Apart from this, the fibrous deposits which are left to pave the tracks of the syphilitic process, being lowly developed tissue, and having a poor blood supply, act at once as a protection and cover to the spirochaetes. Especially is this the case once the antisyphilitic medication has been initiated and the spirochaetes are exposed to the action of arsenic and mercury. In order to make these fibrous refuges as accessible to the spirillocidal action of the drugs as possible, it is necessary to use iodides, which tend to break down

the lowly organized tissue, and, speaking literally, expose any spirochaetes that may be hidden therein to the necessary action of the drugs. This is my reason for using iodides in all the stages of the disease, and I especialy believe in a course of iodides, combined with the soluble citrates, prior to initiating treatment in the stages where generalization is manifest. We are all conversant with the indurated cicatrix which so often remains after a chancre has healed, as well as the shotty glaudular enlargement, which is one of the manifestations of the generalization of the process. If these fibrotic foci be subjected to the action of iodides during, as well as prior to, the stage of generalization, then I contend that the arsenic and mercury will have a very much freer scope for their spirillocidal action, and the results obtained will prove to be very much more satisfactory than heretofore, as proof of which I advance the fact of the quicker production of serologically negative results of tests by the Wassermann reaction.

Soluble Citrates.

By soluble citrates I mean the citrates of potassium and sodium. Sir Almroth Wright pointed out to us the great value of these drugs in inflammations, particularly with regard to the acute stages, and it occurred to me that they might be more than useful as an accessory in the treatment of certain phases of this chronic inflammatory process, and so they have more than proved. Having seen such good results with the soluble citrates, used both internally and locally, in conditions such as carbuncle, where the extent of the induration and infiltration hindered or prevented any free flow of serum through the inflammatory zone, on account of the viscidity and stasis of the blood around the margins, I resolved to employ somewhat similar methods in treating certain of the syphilitic lesions.

The first case I remember having used these drugs on was a patient, who was admitted to the compound in December, 1915, with a chancre on his prepuce. He was circumcized, and shortly afterwards he developed multiple huge crateriform ulcers, serpiginous in outline, and with very deep seated and marked induration at the bases. These rupial ulcers were on his scalp, face, neck, chest, abdomen, back, legs and arms, in fact practically the whole of his skin surface was involved. I understood, as far as I could discover, that this was his condition early in 1916. He first came under my notice in July, 1916, and he was truly a pitiable sight. He could not have weighed more than 38 kilograms (84 lbs.), being merely skin and bone. He had posture contractures of the legs and arms, partly through the long spell in bed, and partly on account of some of the ulcerations about his knees and elbow-joints penetrating through and involving the tendons beneath. He was almost colourless and practically dying, as a result of the intense toxic absorption from the huge sloughing and foul smelling areas of ulceration. He had been subjected to all the available drugs of our antisyphilitic therapy, but, so far from improving his condition in any way, treatment only aggravated it, and he suffered untold agony after intravenous arsenical medication. I advised my brother medical officer, under whose care this patient was, to try the effect of large repeated doses of the soluble citrates internally, and to give the open sloughing ulcers daily washes with warm lotions of the concentrated soluble citrates. The result was truly magical, and inside a fortnight practically all his ulcers had healed up, and he never looked back from that day. The ulcers on his back were more difficult to treat, on account of the fact that the nursing staff, being male orderlies, were not very experienced, although very eager to do all they could for this particular patient, who, on account of his unflagging spirit and unfailing good-humour throughout his affliction, was very popular. As soon as he started on the upgrade, he had to be built up with suitable tonics and nourishing food, before he could be submitted to his specific treatment. The subsequent cicatrices, which marked the positions of the ulcers, took some time to fade. One in particular across his thyroid, extending almost from one ear to the other, and very deep-seated, I removed by excision, on account of it giving him the appearance of having attempted to cut his throat. The wound closed by first intention, and left a scar similar to that after an operation for goître. His tendon adhesions were gradually broken down by manipulation, and although his convalescence was necessarily slow after the very severe attack through which he had been, he was finally discharged from the compound back to the lines as fit for duty, and with a negative Wassermann reaction, on March 22nd, 1917, after having spent 15 months in the Compound. Shortly afterwards he sailed for the front, a happy man. I might mention that his weight on leaving my care was 73 kilograms (11 stone 7 lbs.).

This one experience alone with citrates very naturally gave me cause for some deep thought, and I have adopted them as a part of my routine ever since.

I add them to my "Z. Company" mixture, partly on account of their diuretic action, and partly on account of their action in maintaining the fluid nature of the blood, hence assisting the iodides in their action by obviating the stasis and clotting of the serum which goes on around any inflammatory zone, more or less, whether it be acute or chronic, as a result of the presence of a foreign body, to wit the fibrous tissue.

I have obtained good results from the local use of the citrates in the form of lotions and foments in treating phagedænic chancres, where the induration was so marked as to presage the aftermath of indurated cicatrices when the chancres had healed, such induration being often very difficult to soften, when not so obviated.

General Results of Treatment.

As a consequence of my system of treatment being on the most intensive lines, occasionally a patient suffers from the after-effects. But, taking everything into consideration and the fact that the present world-wide struggle is one of attrition, I consider the results have quite justified my treatment, especially regarding the objects for which

the compounds were established by the Defence Department. Not more than five or six patients at the outside have been lost to the army as soldiers on account of the anti-syphilitic course of treatment they have received at my hands. One died from acute arsenical nephritis and uræmia, consequent on a pre-existing idiosyncrasy for the drug, and three others, as far as my knowledge goes, have been discharged from the Australian Imperial Forces suffering from mercurialism.

Apart from the patients who broke camp and were struck off as deserters, I have only discharged four patients back to the lines with their blood still showing a positive reaction to the Wassermann test, and these patients were either on the borderland between the late secondary and early tertiary stages of the disease, or else in the tertiary stages.

As a proof of tolerance on the part of the patients for this routine treatment, I would state that between 80% and 90% of the total number submitted to the treatment put on weight during the period spent in the compound; in some cases as much as 19 to 25 kilograms (3 to 4 stones) have been gained, these being chiefly the bad cases, who were in a low state of health owing to neglect or want of treatment. All those patients who gained in weight, and who, to all outward appearances, were improved noticeably in their physical condition, expressed the opinion generally that they had never felt better in their lives.

In conclusion, I would like to point out what a magnificent opportunity has been lost to the Commonwealth and its component States for scientific research work in venereal diseases, more particularly with regard to syphilis. If only a small portion of the huge amount of money spent (and I regret to state in many cases, wasted) throughout Australia had been diverted from other channels and expended on this most important branch of medical research, which is surely of vital and national importance, what an immense amount it might have added to our knowledge of these dread diseases, both with regard to the diagnosis and treatment, as well as from the equally, if not more important point of view of prophylaxis.

However, unless conscription be introduced, when one inevitable result would be a refilling of the almost depleted venereal diseases compounds throughout Australia, I am afraid the opportunity has passed, and one can only regret where one should be able to rejoice at the chance of any benefit being obtainable for mankind and future generations during such a bloody Armageddon as that at present raging.

Reports of Cases.

CASE OF PERICARDITIS COMPLICATING PNEUMONIA IN AN INFANT.

By **E. A. Tivey, M.B., Ch.M. (Syd.),**
Wagga Wagga, New South Wales.

I.B., female, æt. $1^{9}/_{12}$ years, was seen by me on the afternoon of August 9, 1917, when she appeared to be beginning a severe attack of pneumonia. The base of the left lung was quite definitely involved at this stage. The child was said to have had a "cold" for a few days prior to this. Next day the child appeared much better, the temperature, pulse and respiration all being much lower, and the patient apparently very comfortable. Examination of the chest revealed no new features. On the following day I was sent for hurriedly, as the child seemed worse. The lung involvement had not appreciably increased, but a distinct pericarditic rub was audible. This was most marked at the base, but could also be heard at the apex. The right side of the heart seemed dilated, but the colour was quite good. I saw the child twice again that day, but she very rapidly went from bad to worse, and at 8 p.m. the temperature was 41° C. and the pulse almost uncountable. The friction rub could still be distinctly heard. The child died about half an hour later.

According to authorities I have consulted—Holt, Goodhart and Still, John Thomson—this is extremely rare, and even when pericarditis does occur in children, the friction rub is often slight and evanescent, so that the lesion is generally revealed only at the autopsy. I think there are several interesting points in connexion with this case:—

(1) The severe onset of the pneumonia, with most acute symptoms, which almost abated 24 hours later.

(2) The emphatic character of the friction rub.

(3) The very quickly fatal effect of the heart complication, death occurring nine hours after it was first discovered. The heart on previous examinations presented no abnormal feature.

EPITHELIOMA OF THE LIP.

By **W. A. Reid, M.R.C.P., D.P.H. (Ed.),**
Sale.

About a week ago I was consulted by a young fisherman, aged 24 years, on account of a growth on the lower lip, which had all the appearance of a malignant tumour. He states it began as a crack three months ago, and would not heal, the non-healing being contributed to by the cold, sea-spray and smoking while at work fishing along the coast, and it was only on his return home that he consulted a medical man, who advised immediate removal of the ulcer. He came to Sale, and when I saw the growth it was about the size of a sixpenny piece, was covered by a brown scab, and had every sign of malignancy. There was no glandular involvement.

I excised it the same day, and sent the specimen to Dr. Mollison for examination. He reports as follows:—

"The sections of the lip specimen showed well-marked epitheliomatous downgrowths into the substance of the lip; they had almost reached the muscular bundles, and there was considerable connective tissue irritation about them; there is no doubt, I think, about its malignant character; the age is the youngest I remember, though I have seen one or two malignant growths of the same type in persons under 30."

STRANGULATED HERNIA IN A CHILD THREE WEEKS OLD.

By **J. H. Ingham, M.B., B.S. (Melb.),**
Dimboola, Victoria.

On the afternoon of Sunday, July 22, a mother brought her child in for examination. There was a history of almost continuous vomiting for 36 hours, with screaming and constipation. The examination disclosed a distended abdomen, a black, tense swelling occupying the left scrotum and extending along the canal to the site of the internal abdominal ring. The temperature was 36.9° C. (98.4° F.); the pulse-rate was 160, and the respiratory-rate 48. The vomiting was found to be fæcal and persistent.

After a hot bath and an attempt at manual reduction, which failed, the child was removed to the theatre and chloroform and ether administered. The swelling being still found to be irreducible, an incision was made exposing the body and neck of the sac. The opening of the sac disclosed a normal testicle, about 30 c.cm. of dark serous fluid, and a black loop of small intestine tightly constricted at the internal ring. The site of the constriction was divided with a herniotomy knife, and the bowel returned to the

abdomen. The sac was then closed with catgut at the internal ring, the muscles brought over the canal with catgut, and the wound sutured in the ordinary way.

The child was returned to bed, and copious enemata were given. In an hour the child passed a considerable amount of flatus. This was followed two hours later by blood and mucus, and about four hours later by fæces.

The vomiting ceased after this, and in ten hours the child was placed on the breast, and has had no further symptoms. The sutures uniting the wound were removed on the ninth day.

Reviews.

REST AND SUGGESTION.

Professor Dercum's book on rest and suggestion in the treatment of nervous and mental diseases[1] was originally written for the "System of Physiologic Therapeutics," edited by Dr. Solis-Cohen, and now appears as a revised second edition. It is divided into three parts; the first, headed rest, deals chiefly with functional nervous disorders, the second is devoted to the therapeutics of mental disorders, and the third to suggestion, normal and special. Of these parts we would single out the first as being the best. The discussions on neurasthenia, hysteria and hypochondriasis are evidently based on wide clinical experience, and the practitioner, for whom, by the way, the book is specially intended, will find not only a first-rate general account of these conditions, but many points in differential diagnosis, as well as many practical suggestions concerning the management of such cases, which are not to be found in text-books.

In treatment, stress is laid throughout on physiological measures, and medicines are assigned secondary importance. Three keynotes are struck, rest for neurasthenia, suggestion for hysteria and occupation for hypochondriasis, upon which forceful themes are constructed. The author insists that neurasthenia is fundamentally a fatigue neurosis, but in addition to rest, pabulum by which the exhausted tissues can be reconstituted, must be supplied. It is urged that because this fact is not fully recognized, physicians often fail in their treatment. "Medicine cannot form tissue, and the various artificial foods and so-called reconstructives foisted upon the market have but slight, if any, tissue-building value. The so-called nerve foods, such as the hypophosphites of lime and soda, and the various predigested preparations of meats and cereals are practically valueless. It is food that is required, not teaspoonful doses of this or that preparation, but food in bulk."

The part on the therapeutics of insanity is also laden with common-sense suggestions, though it does not come up to the level of the first part. We notice a strong plea for the judicious use of sedatives, a fair statement regarding the employment of salvarsanized serum in the spirochaetoses, a disparaging reference to the use of thyroid gland, a recommendation of hypertonic injections in delirium tremens, and valuable hints on the management of victims of the drug habits.

In the last part, the chapter on ordinary suggestion, such as every physician employs habitually, though unconsciously and unintentionally, is disappointingly brief, consisting of but nine pages, so that no attempt is made to compete with Walsh's work on Psychotherapy.

Coming to special forms of suggestions, an unnecessarily long historical account of hypnotism is first given, and is followed by a brief but warm condemnation of the practice. Words to this effect are used. On the whole the field for the application of hypnotism is practically nil, it never cures any excepting those affections which are readily curable by other means; it ranks of necessity with the imbecilities of Eddyism, and, worst of all, it induces a pathological state. With which condemnation there are, we feel sure, many who will not wholly agree. Most neurologists, however, will welcome the attack on psychoanalysis, which is described as "the outcome of the general mystic tendency of the modern world, a practice akin to occultism, cubism, futurism and Eddyism; a form of treatment which requires daily *séances* of long duration, extending over six months to three years or longer, and which, therefore, once started, would appear never to be completed. Only to the jaded and *blasé* psychopathic, hysteric, psychasthenic or hypochondriac, psych-analysis presents something new, something interesting and something pruriently exciting."

When the author leaves the domain of clinical medicine and enters those of physiology and bio-chemistry he is apt to err. In endeavouring to prove that glove-like anæsthesia must be hysterical, he says "that losses of sensation in a limb due to a lesion of the spinal cord, assume the direction of stripes running up and down, in the direction of the length of the limb." He should have said, "lesions of nerve roots." Again, Fauser's statement that *dementia precox* is dependent upon an abnormality of the sex glands, whereby unchanged sex gland proteins enter the blood and form substances injurious to the cerebral cortex, appears to us to be not a fact, but a distinctly doubtful speculation. Likewise the toxic origin of certain forms of insanity, which he drives so hard, is little more than hypothetical.

But these blemishes do not detract from the practical value of the book, which is eminently readable—despite the American spelling—well indexed, set up in large type and marred by few misprints.

[1] Rest, Suggestion and other Therapeutic Measures in Nervous and Mental Diseases, by Francis X. Dercum; 1917. Philadelphia: Blakiston's Son & Co.; Demy 8vo.; Second Edition; pp. 395.

ELEMENTARY CHEMISTRY.

The introduction to the study of chemistry[1] by C. T. Kingzett is intended for use in primary schools. It appears, however, more suitable for the general public and for older students in schools than for young children. The first chapter deals with the constitution, states and properties of matter, with synthesis and chemical changes, with atoms and molecules, with chemical reactions and equations, and with valency. Some description is given of the nature of elements, oxides, acids, bases, metals, alloys and amalgams. The second chapter discusses light, heat, electricity and magnetism. The third chapter is devoted to the atmosphere and to some of the principal elements and compounds. A dictionary of terms, with a chemical connotation, concludes the book. The work is written in a clear style, and conveys much information of general utility. It would serve to give an account of general chemical phenomena and of their application to industrial processes, which could not fail to be of interest to every intelligent person.

[1] Chemistry for Beginners, by C. T. Kingzett, F.I.C., F.C.S., 1917. London: Baillière, Tindall & Cox; Crown 8vo., pp. 106. Price, 2s. 6d. net.

AUSTRALIAN ARMY MEDICAL CORPS COMFORTS FUND.

It is with great pleasure that we are able to acknowledge the receipt of £12 7s. in response to our appeal for the Australian Army Medical Corps Comforts Fund.

	£	s.	d.
Amount previously acknowledged	40	14	0
Dr. James L. Thompson (Castlemaine, Vic.)	5	0	0
Dr. R. A. Parker (Healesville, Vic.)	2	2	0
Dr. J. Ramsay Webb (Footscray, Vic.) ..	5	5	0

In the *South Australian Government Gazette* of September 6, 1917, a proclamation is published rendering bilharziosis a notifiable disease for the purposes of the *Health Act*, 1898.

Clarence Cecil Hains, M.B., Ch.M., 1916 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown, has been nominated for election as a member of the New South Wales Branch of the British Medical Association.

Dr. Howard F. Praagst has resigned his position as Surgical Registrar to the Melbourne Hospital, to enable him to go to the front.

The Medical Journal of Australia.

SATURDAY, SEPTEMBER 15, 1917.

Ankylostomiasis.

Intestinal infections have one factor in common. They are spread by the escape from the human body of the infective organism in the excrement, and by the direct or indirect contamination of the fluids or solids ingested by healthy persons. In the case of enteric fever and dysentery, the causal organism of the disease is conveyed by flies or other insects, or directly to water, milk or solid food, and when it gains an entrance into the body of a susceptible individual, a fresh attack is set up. The obvious prophylaxis of these diseases depends on the careful disposal of the excrement and on the disinfection of all infected objects which might serve as a means of transmission. The evidence of successful prevention can only be gathered from comparative statistics, and a striking demonstration requires years for its fulfilment. In the case of certain parasitic intestinal infections, cure can be effected rapidly, and the absence of re-infection in a previously infected community may be regarded as proof of efficient means of disposition and disinfection of excreta and other material capable of harbouring the infecting agent. The scientists in responsible positions on the International Health Board of the Rockefeller Foundation have recognized that no more practical means of educating a community in the prophylaxis of intestinal infections generally exists than a comprehensive ankylostomiasis campaign, including a search for ova in the stools of every individual and a treatment until cure is effected in every case of latent or active infection. Incidentally, those conducting the campaign educate the persons under control in regard to the extreme importance of care in the use of latrines and in the acts of defæcation and micturition, and institute a system of reliable latrines and urine pits or other controllable receptacles for urine. Ankylostomiasis is prevalent in Queensland, Papua, the mining districts of New South Wales and elsewhere in Australia. Enteric fever occurs in every part of the Commonwealth. An ankylostomiasis campaign would therefore serve incidentally as an enteric fever campaign. The Rockefeller Foundation, as has already been pointed out in these pages, has extended a generous invitation to the Commonwealth Government to inaugurate a campaign of this kind in Papua, and this work was begun by Dr. Waite on July 1, 1917. The importance of the undertaking will be gleaned from the preliminary report which he publishes in this issue.

A further invitation has been extended to the Queensland Government. The prevalence of ankylostomiasis in North Queensland has been determined some years ago. The urban population from Cookstown to Rockhampton is estimated at about 52,000, and the population working in rural districts in this area, including those on the sugar plantations, is probably not less than 20,000. An examination of every man, woman and child in this area could be completed in approximately 18 months, provided that the workers are expert. Dr. Waite, who has made a special study of this form of investigation, would train two medical practitioners to work as microscopists, and his staff would comprise in addition two field workers and a clerk. The Foundation has experience on which the probable cost of this work can be estimated. The figure given is £5,000 per annum. This means that for a relatively small sum of money an immense area of Queensland could be cleared of infection with the hook worm and the community taught how to banish enteric fever and the dysenteries. The Rockefeller Foundation is prepared to bear two-thirds of the cost, so that the expense to the Queensland Government would be only £1,666. We understand that the proposal is now under consideration by the Ministry, and it may be assumed that the estimates will contain provision for this work, in view of its extreme importance to the public. After the campaign has been inaugurated, and the survey is complete, there should be but little difficulty in maintaining the benefit that has been achieved. The survey and treatment would be undertaken with the collaboration of the medical practitioners of the several districts included in the area. The methods would be-

come familiar to them in the course of the investigation, and they could then perpetuate the work to the advantage of the community and of themselves. No more important innovation in public health has taken place in Australia for many years, and the results will be watched with intense interest by all who have the welfare of the people at heart.

THE TEACHING OF PHARMACOLOGY.

A medical school is usually regarded as being incomplete if every important branch of medical training is not represented by a self-contained department. In accordance with modern conceptions there should be separate departments of anatomy, zoölogy, physiology, botany, physics, chemistry, biochemistry, pharmacology, including materia medica, pathology, bacteriology and parasitology, hygiene, medicine and surgery. The special branches of medicine and surgery, such as obstetrics, gynæcology, orthopædics, ophthalmology, laryngology, rhinology and otology, urology, psychiatry, neurology, etc., demand special divisions in the clinical school rather than in the medical school in the university. Every one of the sciences should be placed in the hands of a professor, whose function it should be to train students and to initiate research with the object of advancing his science. The professors of the faculty of medicine should therefore number thirteen. The history of the medical schools of universities reveals that the establishment of these several essential departments has taken place gradually. In the University of Sydney some of the medical chairs are of recent date, while others have yet to be instituted. For several years it has been recognized that the sciences included under the collective term of pharmacology should command a chair. We understand that two reasons have been active in causing delay in its establishment. The first is the financial one, and the second and more important is the fact that a suitable occupant was apparently not available. Many years ago a temporary expedient was adopted by the appointment of a lecturer in pharmacology, whose duties included the holding of courses for students of pharmacy. Class instruction for medical students in pharmacology has been given by Dr. H. G. Chapman, the Assistant Professor of Physiology. The temporary arrangements, like other temporary arrangements, served to tide over a difficulty. The Faculty were forced sooner or later to find a permanent solution. It is understood that the Pharmacy Board has precipitated the matter, and that the decision has been still further hastened by the resignation of Dr. Chapman from his position as Assistant Professor of Physiology. The Pharmacy Board approached the Minister of Public Instruction with a request to establish at the Technical College a school of pharmacy, where pharmaceutical students could receive their courses of instruction. This proposal naturally would arouse considerable opposition, since, by the removal of these students from the University, their standard of technical education would be lowered in view of the fact that the facilities for scientific training at the College would be inferior to those existing at the University. The obvious reply is therefore the proposal for the establishment of a chair of pharmacology. The Senate will have to determine whether this proposal is a practical one. In the first place, it will be necessary for the Senate to provide a sufficient sum of money annually for the foundation of this chair. The amount needed is not likely to be a large one, in view of the fact that certain sums will be saved by the altered arrangements. The State has long since recognized its duty to the public of providing for medical education at the University, and this additional expense must be regarded as a normal increase, rendered necessary by the steady growth of a valuable national asset. Were the times normal, the State would be required to provide a considerably larger increase in the annual subsidy, to enable the Senate to establish other desirable chairs. The next point that requires the attention of the Senate is the selection of a professor and a definition of the duties devolving on him. There is urgent need to raise the preliminary standard of education of pharmaceutical chemists, and for this reason the professor should be required to include among his chargelings pharmaceutical students who would be required to pass the school leaving certificate examination and to attend courses in pharmacy, inorganic and organic chemistry, botany and materia medica.

Medical students should look to the Professor of Pharmacology for tuition in pharmacology and biochemistry, as well as in toxicology and materia medica. It is quite obvious that the present Assistant Professor of Physiology, who has been teaching these subjects to medical students for some time, is peculiarly suited to fill this chair.

RHUBARB.

Many letters have appeared in the British press during the last twelve months dealing with cases of more or less serious illness resulting from the use of boiled rhubarb leaves as a substitute for spinach or other green vegetables. These letters have led to an appeal to history to afford information on the consumption of rhubarb leaves as a pot-herb in the centuries that have passed. It has been asserted that rhubarb was brought into England in 1573, and that it was then found superior to spinach and to beet as a vegetable. An interesting article which had been prepared for the *Kew Bulletin*, a publication which has been temporarily suspended owing to the shortage of paper in the United Kingdom, is printed in *Nature*.[1] We learn from this account that the Monk's rhubarb, which was grown in the golden days of Queen Elizabeth, was a dock belonging to the genus *Rumex*. In 1597 John Gerard described this plant, and noted that it was not the medicinal rhubarb, the root of which was imported from Chinese Tartary by way of Asia Minor. Rhubarb (*Rheum rhaponticum*) was introduced into England in 1672 by John Parkinson, who made a syrup from the leaves for medicinal purposes. By the middle of the eighteenth century the practice of making tarts from the leaf-stalks in the spring of the year had come into favour in certain districts of England. In 1734 *Rheum undulatum* and in 1763 *Rheum hybridum* were brought into Britain, and the varieties of culinary rhubarb are derived from these three wild species. Although rhubarb was grown in market-gardens in the eighteenth century, its use declined until 1810, when John Myatt, of Deptford, again tried to establish the plant on the market. John Myatt obtained his roots from St. Petersburg, through the kindness of Isaac Oldaker, gardener to Sir Joseph Banks, "the father of Australia." Oldaker had previously been gardener to the Emperor of Russia at St. Petersburg. The blanching of rhubarb was discovered at the Chelsea Physic Garden in 1815, and much attention was given to this method of improving rhubarb in the early years of the nineteenth century. In 1828 rhubarb was an expensive luxury, as 100 stalks sold for five shillings. Three years later its price had fallen so that it was widely used by the poor in Edinburgh and Glasgow.

Culinary rhubarb is quite distinct from medicinal rhubarb, and the root of the culinary plant does not possess the cathartic and astringent properties of the Chinese rhubarb. It has been long known that the stalks of rhubarb contain oxalic and malic acids, combined with potash, and it has been suggested that injurious effects arise from the use of these stalks. Dr. Wm. Prout proposed in 1853 that an Act of Parliament should be passed to forbid the sale of so dangerous a poison. The recognition that some urinary calculi contained oxalate of lime had much to do with the growth of the belief in the harmful nature of rhubarb. On the other hand, the consumption of rhubarb stalks as a substitute for fruit has been enormous for nearly a century. The cases of illness ascribed to its use are so few as to be negligible, though they show that certain persons cannot partake of rhubarb with impunity.

At one time the inflorescence was eaten as a vegetable, and a correspondent of the *Gardener's Chronicle* considered that the flower of rhubarb was as superior to spinach as the cauliflower is to the leaf of the cabbage. The use of the inflorescence has not become general, as cases of illness, sometimes fatal, follow its consumption. Attempts have also been made to employ the leaves as green vegetable. A number of instances of fatal poisoning due to eating boiled leaves of rhubarb have been recorded in medical literature. Analyses of the plant show that the leaves contain much less water than the stalks, and the quantities of organic and inorganic substances in the leaves are more than double those of the stalks. It may be affirmed that rhubarb leaves should not be eaten as food, as they may give rise to poisoning, if taken in sufficient amount.

[1] *Nature*, May 31, 1917.

MALARIA IN THE BALKAN PENINSULA.

The knowledge that the protozoa causing malaria can be seen with the microscope in the blood of patients, and that quinine is a specific parasiticide for the plasmodia, has led many physicians to regard the diagnosis and treatment of patients, suffering from malaria, as a simple matter. Those who have practised medicine in tropical countries have been aware of the protean forms of malarial disease, of the frequent microscopical examinations needed to detect the parasites in the blood, and of the patience and skill required in the use of quinine. The appalling outbreak of malaria in the Adriatic and Balcanic zones during the present war has been studied by Lieutenant-Colonel Aldo Castellani, R.I.N.M.S.[1] In these zones the classical forms of ague have not been frequent, and the atypical varieties of malaria have simulated many other diseases. At Skopolji, in Serbia, an outbreak of so-called scurvy occurred in a Servian regiment in September, 1915. The patients became pale and languid. The whole body was covered with petechiæ and tense, indurated swellings were noted from extravasations of blood. In many patients bleeding was occurring from the gums. Hæmorrhages were frequent from the nose, stomach, bowels, lungs and kidneys. Fever was not present, and the spleen appeared enlarged in only a few patients. Parasites were found in some patients, but all improved rapidly with quinine. At

[1] *Journal of Tropical Medicine and Hygiene*, July 16, 1917.

Uskub patients with the signs and symptoms of pernicious anæmia were treated for months with arsenic before a diagnosis of malaria was made. The discovery of parasites and the rapid improvement after injections of quinine intravenously revealed the nature of the ailment. Many cases resembled diseases of the nervous system. Some cases simulated beriberi of the œdematous type; others were mistaken for cerebro-spinal meningitis. Hemiplegic and monoplegic paralyses occurred from hæmorrhages. At Monastir and in Macedonia cases similar to typhoid fever were far from rare. Other patients appeared to be suffering from Malta fever. Malaria may give rise to attacks of acute dysentery, and at times the symptoms suggest cholera.

In regard to diagnosis, Castellani points out the importance of the clinical examination of the patient in detecting pigmentation of the skin and slight enlargement of the spleen. He believes that the finding of Laveran's parasites in the blood is the only certain factor in diagnosis. The microscopical examination of the blood must be made frequently, otherwise the parasites may be missed. Negative findings are of little value unless often repeated at different intervals of time. The failure of quinine to influence the fever does not, in his opinion, exclude malaria. The prognosis in this disease is good, provided an appropriate use is made of quinine. Intramuscular and intravenous injections of quinine should be employed in all serious cases. Castellani states that the morbidity due to pernicious malaria was decreased from 100% to 20% of the patients in a Serbian hospital by the introduction of intravenous injections. He advocates large doses of quinine, four grammes or more daily, in all cases of malaria. In some patients arsenic, in others antimony and in others phosphorus may be advantageously administered along with quinine. These drugs should only be given when the patient responds slowly or not at all to quinine. Castellani is of opinion that malaria can be controlled if quinine is rightly utilized.

THE MAKING OF A HEALTHY NATION.

The health and prosperity of a community depends on the amount of intelligence expended on the care of its infants. Many healthy children presage virility and strength of succeeding generations. It therefore follows that any movement which is calculated to bring enlightenment to the masses on the all-important subject of infant rearing, must be of immeasurable value. A Child Welfare Exhibition lasting for a week was held at the City Hall, Hobart, from August 20 to August 26, 1917, and was so skilfully planned and managed by a committee including representatives of the Women's Health Association, the Bush Nursing Association, the District Nursing Association, the Young Women's Christian Association, the Salvation Army and many other useful organizations, that its success was assured long before the doors were opened. His Excellency the State Governor performed the ceremony of declaring the Exhibition open, and during the course of the week many important lectures and demonstrations by competent experts were delivered to large audiences. The Chief Health Officer, Dr. L. Park, taught a wholesome lesson on milk contamination, and also gave a lecture on first-aid to little children and the feeding of little children. Dr. J. Sprott contributed a powerful address on the cause and prevention of infant mortality during the first week of life. Dr. E. S. Morris, the Medical Superintendent of the New Norfolk Hospital for the Insane, delivered a valuable lecture on the problem of the mental defective and its solution. Dr. Ethel Hawkins spoke in simple language on the common complaints of school children. The Matron of the Hobart General Hospital, Miss Gluyas, dealt with the nursing care of infants; while Miss Rowntree conducted an inimitable display of the Kindergarten system. Hobart is peculiarly fortunate in regard to its infant schools. The ladies in charge are endowed with the power of compelling obedience and affection of the little ones, exhibit a real genius in managing them and possess considerable musical ability. They have created an atmosphere rarely equalled in these institutions. Many other lectures and demonstrations of a useful nature contributed to the success of the movement from an educational point of view. In addition to these heart-to-heart talks with mothers and girls, the aim of the Exhibition was reached by means of direct object-lessons in the Exhibition proper. Exhibitions of the same character have, it is true, often been organized and set up, but they lose nothing in the repetition, and the Hobart endeavour was excellent on account of the thought and energy expended in its preparation. A striking characteristic of both the lectures and the Exhibition was that controversial matter was excluded as far as was possible, and the people were taught things which have the endorsement of those who have studied the various subjects connected with the welfare of infants.

THE MEDICAL ASPECTS OF AVIATION.

While there is nothing essentially new in the physiological behaviour of the human body during aviation, there are certain combinations of changed function which render the study of service with the Naval Air Fleet of interest to the physiologist and to the clinician. Aviation during war-time differs from aviation in peace by the introduction of increased risk, increased excitement and increased demand for prompt and purposeful action. The naval aviator must possess all the special qualities essential for successful ordinary flying, but must possess them to a highly developed degree. It is instructive to read a lecture which Surgeon H. Græme Anderson, R.N., addresses to pupils at air stations on "Some Medical Aspects of Aviation."[1] He warns pupils that an individual must be physically and temperamentally fit when about to make a flight. The aviator who goes up when feeling unwell is accepting an unjustifiable risk. He should not be deterred from abandoning a flight by the idea that others may attribute this disinclination to fly to fear. The

[1] *Journal of the Royal Naval Medical Service*, July, 1917.

author states that flying is a question of an active, well-balanced, decisive mind and a series of sound and quick reflex actions. He instances how the quick working of the visual response is the most important safeguard. A full, normal vision is, in his opinion, quite indispensable. Second to the visual reflex comes the auditory reflex, which acts normally in $^{14}/_{100}$ of a second. Good hearing is very important, and since a defect in the engine may be detected by sound, an unimpaired response to the auditory stimulus will often save the aviator's life. Tactile and muscular sense reflexes are also important. The sense of balance necessary for safe flying means intact semi-circular canals. He finds that ill-health, fatigue, worry or excess in alcohol may slow down the reflex responses sufficiently to make all the difference between safe and dangerous flight. He advises aviators to avoid alcohol altogether, and is of opinion that the majority smoke too much. The diet should be generous and nourishing, and proper sleep is important. He informs his pupils that fear is rare with a novice, largely because the aviator has so much to occupy his attention that he has no time to be afraid. As proficiency is gained, there is a great tendency for over-confidence to develope. He pleads for coolness, level judgement and quick reflex actions. After dealing with the most suitable clothing, he teaches that sound teeth and gums are necessary, as the majority of aviators fly with their mouths slightly open. In cold weather a sensitive skin may be protected against frost-bite by the application of vaseline. In regard to air-sickness, he has found that the form analogous to sea-sickness is rare, and is more often met with in a passenger who has been subjected to steep spirals and "switchbacks" than in a pilot. On the other hand, air-sickness due to the action of rarefied atmosphere at considerable heights is frequent. At about 1,800 metres the respiratory-rate and pulse-rate become more rapid; at 3,000 metres buzzing in the ears, difficulty in hearing, headache, fatigue and torpor occur. The deafness becomes more marked on descending, and may be accompanied by earache. These ill-effects may be avoided by oxygen inhalations when high altitudes are reached.

THE LODGE QUESTION.

In another column Dr. E. V. Roy Huckell gives a full account of his view of the dispute between the Friendly Society Lodges and the Victorian Branch of the British Medical Association. There are two expressions in his letter to which we have to take exception. The first is the word "strike." A strike is defined as a refusal to work, until terms are arranged between employers and employed. The British Medical Association has long held the opinion that contract practice shall be regulated in such a manner that the lodge doctors are not subjected to intolerable conditions. When Friendly Societies refuse to accept fair conditions of service, the Association calls upon its members to sever their connexion with these bodies and to refuse to recognize them until they, the Friendly Societies, are prepared to accept the conditions of service sanctioned by the British Medical Association. In the meantime, the doctors attend the members of the lodges as private patients, or as hospital patients. There is no question of refusing to work. The refusal is merely to enter into a contract with a third party, the executive of the lodge, to accord medical attendance to the members of the lodge for a fixed weekly contribution. The executive of the lodge at times attempts to engage doctors who are not members of the British Medical Association, but experience has taught that not a few members of the lodge refuse to entrust their lives to men who, for various reasons, have rendered themselves ineligible for membership of the representative organization of the medical profession. In these circumstances the patients, having no quarrel with the doctors, return to those practitioners who have previously attended them satisfactorily.

The second point is also of importance. Dr. Huckell refers to the "black list" on the last page of this *Journal*. We publish no black list. The list which appears each week on the last page is neither more nor less than it purports to be—an important notice. Medical practitioners are requested not to apply for any appointments referred to in the list without having first communicated with the Honorary Secretary of the Branch indicated. It does not follow that any given appointment named in the list is a prohibited appointment. The members find out from the Honorary Secretaries on application what the conditions are which rendered the inclusion of a given appointment in the list advisable. Were it a black list, the notice would be differently headed, and members would be informed in plain terms that no one could apply for the positions and retain his membership of the British Medical Association.

MOBILIZATION OF THE MEDICAL PROFESSION IN NEW ZEALAND.

The Medical Advisory Board of New Zealand laid before the Minister for Defence and the Minister for Public Health the amended proposals of the British Medical Association in regard to the mobilization of the medical profession on July 26, 1917.

The New Zealand Branch of the British Medical Association is asking for a mobilization of the whole medical profession, including every member on the register. In view of the fact that the requirements of the military authority are depleting the ranks of the civil profession, it is suggested that the Advisory Board should have control in a military sense over every practitioner. When medical officers are required for the Army Medical Corps, or doctors are needed for civil practice, the Minister for Defence or the Minister for Public Health, as the case might be, would apply to the Advisory Board for the number of practitioners needed. The Government would render itself liable for the remuneration, not only of those taken for military service, but also for those sent to districts in the Dominion in need of a medical practitioner. An income of £600 a year, with £250 a year for motor-car, drugs and other expenses, should be guaranteed. If the practitioner earned this sum, no claim would be made from the Government. The Advisory Board was prepared to welcome the Director-General of Medical Services and the Inspector-General of Hospitals, as representatives of the two Government Departments on the Board. The record of the deputation, and the text of the recommendations of the Medical Advisory Board, are published in *The New Zealand Medical Journal* of August, 1917.

Abstracts from Current Medical Literature.

MEDICINE.

(87) Hyperthyroidism in Sailors.

G. M. Lindlay (*Journ. Royal Naval Med. Service*, April, 1917) states that Crile attempts to trace the cause of certain of the emotions to the secretions of the liver, adrenal and thyroid glands, believing that these organs, together with the brain, form a "kinetic system," governing more particularly rage and fear. The author observes that it is more than a mere coincidence that the appearance of a patient with Graves' disease is closely similar to that of a person suffering from the extreme of terror. In war the emotions of fear and rage have free play and, as Crile has shown in dogs and rabbits, the expression of these emotions is accompanied by increased secretion of the adrenal and thyroid glands. The author records four cases of sailors engaged in the war developing symptoms of hyperthyroidism. All had been subjected to a more or less continuous strain, a condition approximating to that of life in the trenches. In all these cases thyroid extract was given in doses of 0.3 gms. (5 grs.) thrice daily for three days as a test for hyperthyroidism. As a control a similar amount was given to four other patients not suffering from hyperthyroidism. In the four control cases no symptoms were evoked, while in those suspected of hyperthyroidism there was a marked exacerbation of all the symptoms. The tremor of the hands and tongue became more marked, the pulse-rate rose in each case to 120-130, while palpitation and pain over the heart became more marked. Exophthalmos and eye symptoms of any kind were not specially marked in any of the cases. This is interesting when it is remembered that experimentally protrusion of the eyeballs has rarely been caused by feeding with thyroid extract, although stimulation of the cervical sympathetic easily produces it. The condition known as "soldier's heart" has been regarded by some as due to hyperthyroidism, brought on by trench warfare. Parkinson, however, denies this, and out of 90 patients could only find two in which a diagnosis of hyperthyroidism could be justified.

(88) Trinitrotoluene.

Walted G. Smith (*Dublin Journ. Med. Science*, May, 1917) discusses various high explosives, and deals more particularly with trinitrotoluene. This is obtained by the graduated action of HNO upon toluene, and is a true nitrocompound. It is insoluble in water and soluble in ether, acetone and fixed oils. It is quite safe to handle. When heated in the open it suddenly takes fire without detonation. It can be absorbed by the skin and may cause dermatitis, followed by desquamation. Some persons are more susceptible than others. The author caused slight punctiform erythema on the back of his hand by rubbing in an ethereal solution; rubbing trinitrotoluene and liquid paraffin into the palms evoked no result. The main channel of absorption is the skin, especially if it be greasy. Benjamin Moore provoked toxic symptoms in himself by rubbing an oily preparation into his palms. In a factory he had breathed fumes and dust, without inducing toxic symptoms. Munition workers who handle trinitrotoluene are liable to gastritis, abdominal pain, and persistent constipation. Trinitrotoluene absorption induces cyanosis and hæmolytic changes, and methæmoglobin is demonstrable. Serious lesions are caused in the liver. These appear to lie between a subacute yellow atrophy and an ordinary multilobular cirrhosis of irregular distribution. Jaundice appears and sometimes ascites. Hæmorrhages also occur in both skin and viscera. The urine is dark, and may contain albumin and bile. Leucin and tyrosin have been observed. In 1916 about 50 deaths had occurred from toxic jaundice, a mortality among those exposed of 0.05%. When death occurs it is usually about three weeks after the first appearance of jaundice, and is preceded by delirium and coma. Test for trinitrotoluene in the free state. A weak ethereal solution, diluted with water, forms a deep red with potassium hydrate, preferably in alcoholic solution. Dinitrotoluene yields a blue colour with potassium hydrate.

(89) Urinary Amœbiasis in the Sudan.

A. J. Chalmers and W. R. O'Farrell give an account of urinary amœbiasis (*Journ. of Trop. Med. and Hygiene*, May 1, 1917), and give notes of recorded cases divided into classes according to whether the site of infection was high up or low down in the urinary tract, or the site in the urinary tract was unknown. Full details are recorded of a case from the Sudan. This was in a Greek lady, aged 32, taken ill on December 17, 1914, with pain in the right loin and buttock and hæmaturia. About the middle of 1914 she had continuous pain in the lumbar region for a few days, the urine being turbid, but no blood being observed. Similar attacks recurred from time to time until the present illness. She had never suffered from dysentery. The present illness began with severe pain as described; it lasted all night and was attended by vomiting. Next day she felt better, but passed, with difficulty, a little blood-stained urine. The temperature varied between 37.2° and 37.5° C. The liver and spleen were normal. Leucocyte examination: polymorphonuclear leucocytes 61%; mononuclear cells, 8.4%; large lymphocytes, 22.4%; small lymphocytes, 5.6%; eosinophile cells, 2.2%; mast cells, 0.4%. No malarial or other parasites could be found in the blood. The urine was dark red and clear with the exception of a slight translucent jelly-like deposit. The reaction was acid, and the specific gravity 1020. No albumin or sugar was found in the supernatant fluid. On centrifugalization a few red blood cells and leucocytes were found, and numerous bodies identified by the authors as the precystic stage of the life cycle of *Loeschia histolytica*. The urine was tested aerobically and found sterile. No amœbæ or other parasites were found in the fæces. Hexamine was given, and two days later the urine contained degenerating amœbic cysts. Aerobically tested the urine was sterile. Some days later only a few degenerating cysts could be found embedded in a little mucus. This urine was kept for about six months, and remained sterile. The patient was treated with emetine and the urine examined again, neither mucus nor amœbæ being found. The patient was observed for two years, and never again showed any urinary symptoms. The authors conclude that the case is typical of infection high up in the urinary tract; the woman suffering from amœbic pyelitis. They believe that all these urinary infections are derived from the bowel, that as a rule they reach the urinary tract *viâ* the blood-stream, and that it is only in infections situated low down in that tract that the amœbæ pass directly from the bowel to the bladder or urethra *viâ* the tissues. The correct treatment is intramuscular injections of emetine and hexamine by the mouth.

(90) Focal Pulmonary Tuberculosis.

Eugene L. Opie publishes an exhaustive research on focal pulmonary tuberculosis in children and adults, with numerous figures and excellent X-ray illustrations (*Journ. Experim. Medicine*, June, 1917). Tuberculous infection has been found in the lungs of 50 adults (*i.e.*, over 18 years of age) examined. Approximately one-half of all adults have encapsulated lesions of the lungs or bronchial lymphatic glands, whereas in one-third pulmonary and lymphatic lesions are firmly calcified and completely healed. Tuberculous pulmonary lesions of adults who have died of diseases other than tuberculosis are of two types: (1) apical tuberculosis similar to the usual type of fatal phthisis and unaccompanied by caseation of the regional lymphatic glands; (2) focal tuberculosis not more commonly situated in the apices of the lungs than elsewhere, and accompanied by caseation, or calcification of the adjacent lymphatic glands. Focal pulmonary tuberculosis of adults is identical with the tuberculosis of childhood. It occurs in at least 92% of all adults. It may be acquired between the ages of 2 and 10 years, but in more than half of all individuals in St. Louis, U.S.A., it makes its appearance between the ages of 10 and 18. Tuberculosis of children does not select the apices of the lungs, is accompanied by massive tuberculosis of regional lymphatic glands, and exhibits the characteristics of tuberculosis in a freshly infected animal; whereas tuberculosis which occurs in the pulmonary apices of adults has the characters of a secondary infection. Almost all human

beings are spontaneously vaccinated with tuberculosis before they reach adult life.

NEUROLOGY.

(91) "Puncture" Headache.

Dana (*Journ. Nerv. and Ment. Dis.*, N. York, April, 1917) reported that the methods of modern medicine had created, not a new disease, but an additional morbid state, namely, the headache and associated symptoms following lumbar puncture. Though the condition was only temporary and not serious, it was worthy of attention. The headache rarely began until the day following a puncture, when usually the patient was allowed to get up. It might start, however, directly after operation. The pain was diffuse, bilateral and rather severe, affecting the brow, or the back of the neck or the occipital region; it might be attended by nausea or even violent vomiting, also by giddiness and mental confusion and faintness. The symptoms were all increased by active exercise, and were usually promptly relieved by lying down. The flatter the patient lay the better he felt. The condition lasted, with remissions, from five or six days to two or three weeks. The symptom was more common in patients whose cerebro-spinal fluid came out under low pressure; in other words, the healthy cord reacted badly to puncture. It was common and severe in young adults, in women and in persons of highly-strung nervous temperament, also in the anæmic. In about one-half of the cases of lumbar puncture in a hospital, there was no headache, even if the patient were allowed to get up very early.

(92) Brachial Neuritis and Sciatica.

Patrick (*Journ. Nerv. and Ment. Dis.*, N. York, March, 1917) remarked that of the cases which came to him as brachial neuritis, only about one in ten was really a case of this disease. About four-fifths proved to be arthritis of the shoulder joint. The remaining one-tenth was made up of cases of bursitis, syphilis, neoplasm, cervical rib, cervical arthritis, cervical caries, osteomyelitis and post-herpetic neuralgia. One of the most striking features of arthritis, as distinguished from neuritis, was that some movements of the shoulder, particularly against resistance, were painful. The best test movement was crossing the forearms behind the back. Frequently the pain of arthritis was felt, not at the joint, but about the insertion of the deltoid. He called attention to the frequency with which arthritis of the hip-joint was mistaken for sciatica. He believed sciatica to be as rare as arthritis of the hip was common. The best movement for discovering this arthritis was what he called the *fabere* sign, the letters of this word standing for flexion, abduction, external rotation and extension. With the patient supine, the ankle of the side to be tested was placed above the patella of the opposite knee, and the knee of the leg, thus flexed, was depressed towards the table or couch upon which the patient lay. In many cases of arthritis ordinary flexion, abduction and rotation of the thigh might be free and painless, but when the above-mentioned test was used, either the knee could not be depressed to the normal degree, or such depression caused pain. In these cases, also, repeated examinations were apt to show a slight rise of temperature and eight to nine thousand leucocytes.

(93) The Mechanism of Paranoia.

Abbot (*Journ. Nerv. and Ment. Dis.*, New York, April, 1917) submitted that to understand how the delusions of the paranoia arose and persisted, we needed to review certain normal mental processes. In adjusting himself to all the varying situations which made up his environment, the normal man was exposed to failure in three ways. First, he was ignorant. We were all more or less ignorant. We knew the environment only incompletely at best. Secondly, he made mistakes. He thought something was so that was not so. (Ignorance was negative, error was positive.) Thirdly, he was prejudiced. He had feelings, unjustified or too intense, or both, associated with a certain idea or group of ideas. We all had prejudices. They might concern the Germans, Shakespeare's plays or snakes, or a host of other things about which controversies arose. Ignorance and error contributed to prejudice, but it was the intensity of the feelings which made the prejudice persist. Ignorance and error were easy to correct, being simple feelings, but prejudice, with its numerous involved feelings and multiplex causes, was difficult. Abbot held that the mechanism thus outlined was operative in true paranoia, also, by the way, that it accounted for the absence of dementia in such cases. As to why the mechanism stopped short in most cases, but in rare cases allowed development into delusions of paranoia, he thought the answer was to be found in the make-up of the individual. Thus the ignorant who did not like to admit their ignorance, held prejudices, but did not elaborate them. Persons, on the other hand, whose make-up was characterized by imaginative activity, lively emotions, strong sympathies and equally strong hates or repugnances, elaborated their prejudices, and sometimes were strangled by them. Cases could be graded from those holding simple prejudices, such as we all do, down through the pessimist, the anti-vaccinationist, the religious reformer, and on to the paranoiac, who harmlessly kept his ideas to himself, and further to the paranoiac whose anti-social acts necessitated his restraint in a mental hospital.

(94) Radiculitis.

Dejerine (*Rev. Neurol.*, 1916, XXIII.) thought that radiculitis was essentially a sensory syndrome, although it was commonly associated with motor disturbance. In pure motor form it never occurred, excepting in the case of the cranial nerves. A fundamental character was its strictly radicular topography, its confinement to spinal root zones. The most important symptom was the spontaneous, continuous or paroxysmal, often very severe neuralgic pains, described by the patient as tearing, grinding, or of lightning character. This pain differed from that of ordinary neuritis or neuralgia inasmuch as it was not increased by handling or pressure; it was aggravated, however, by coughing or sneezing. Objectively, over the affected root area, there might be, in the beginning, hyperæsthesia, followed later by hypæsthesia and even anæsthesia. When motor disturbance was present it took the form of a flaccid paralysis, and might be followed by atrophy. Sufferers were commonly the subjects of syphilis or tuberculosis, but there were other causes, and upon the cause the prognosis depended. Epidural injections of novocaine relieved the pains.

(95) Neuro-syphilitic Immunity.

Sicard and Lévy-Valensi (*Bull. et Mém. Soc. Méd. Hôp. de Paris*, 1916, XL.) referred to the benignity of syphilis in the Arabs and their well-known immunity to nervous complications, in particular, tabes and general paralysis. Having had occasion to treat a number of wounded Arabs, they took the opportunity of examining their blood and cerebro-spinal fluid by the Bordet-Wassermann reaction, a designation which, owing to Bordet's priority, should be substituted for Wassermann's reaction. Thirty Algerians and Moroccans, aged from 20 to 35 years, were examined, and a positive reaction was obtained in about one-third, although no clinical evidence of nervous syphilis was found in any. This indicated that the nervous parenchyma, like that of other tissues, could be protected by racial immunity from the syphilitic poison, although this might be present in the immediate neighbourhood.

(96) Neuro-syphilitic Manifestations after Treatment with Salvarsan.

Gaucher (*Ann. des Malad. Vénér.*, 1916, XI.) believed that in syphilis treated with salvarsan or neo-salvarsan nervous symptoms were more frequent and that severe manifestations might develope earlier than when the disease was treated with mercury, or even than when there was no treatment at all. He recorded two cases in which headache supervened and persisted for two years after syphilis and salvarsanization; a headache quite distinct from that of the early period of infection and resembling the headache which marked the onset of neurasthenia or general paralysis. Both patients recovered after treatment with mercury and iodide of potassium. Gaucher also related the cases of a doctor who developed general paralysis one year after infection, and of a cavalry officer who developed tabes three years after infection, notwithstanding that both had been treated with salvarsan.

Medical Societies.

NORTH-EASTERN MEDICAL ASSOCIATION.

(Affiliated with the British Medical Association.)

A meeting of the North-Eastern Medical Association was held at Grafton, New South Wales, on August 16, 1917, Dr. A. J. Opie, the President, in the chair.

Dr. T. J. Henry moved:—

> That the proper military authority be informed that, in the opinion of this Association, it would be advisable, in the event of another call up of men for home defence under the Defence Act, the medical officers to whom the duty of examining is allotted in country districts, be transferred for that duty to districts other than those in which they usually reside and practise.

The motion was seconded by Dr. J. Coen, and was carried unanimously. It was subsequently determined, on the motion of Dr. Henry, supported by Dr. G. Romeo, that the Council of the New South Wales Branch be requested to include this resolution as a motion on the agenda paper of the forthcoming meeting of Delegates with the Council.

It was further resolved, on the motion of Dr. Henry, seconded by Dr. Coen, that:—

> The Delegate be instructed that, in the opinion of the North-Eastern Medical Association, it is advisable to have State registration of both obstetric and general nurses.

The Delegate of the Association was also instructed to move at the Annual Meeting for a discussion on the question of every trained nurse being required to qualify for general and obstetric work.

Dr. O. A. Diethelm moved and Dr. G. Romeo seconded:—

> That this Association is opposed to any private arrangement being made between practitioners and employers.

The motion, which had reference to the Workmen's Compensation Act, was carried.

The Delegate was instructed to oppose the suggestion to increase the fees for Friendly Society Lodges in districts outside the metropolitan area.

Dr. T. J. Henry moved and Dr. P. E. Corlis seconded:—

> That the Delegate be instructed to raise the question of the feasibility of instituting an insurance scheme to provide for the widows and dependants of any member of the British Medical Association who may lose his life on active service, and to raise funds to subsidize the dependants of those who have already died on active service.

The appreciation of the North-Eastern Medical Association was placed on record of the action of Dr. C. Anderson in enlisting for active service. The members wished him a safe return. It was resolved to send letters of congratulation to Drs. C. C. Corlis, T. Evans and G. W. Macartney on their achievements on active service.

University Intelligence.

THE UNIVERSITY OF SYDNEY.

A meeting of the Senate of the University of Sydney was held on August 13, 1916, at University Chambers, Phillip Street, Sydney.

The following degrees were conferred in person:—

Bachelor of Science: John Stanley Storey.

Bachelor of Engineering (in Civil Engineering): William Aitken Miller (*ad eundem gradum*).

Letters were received from the Trustees of St. Paul's College and of the Wesley College, notifying the appointment of a fifth trustee, as follows: St. Paul's College, the Rev. A. H. Garnsey, M.A.; the Wesley College, Mr. George Cull.

On the recommendation of Professor Irvine, it was resolved that the Arthur Oakes Prize be awarded annually for an essay on some subject in the Department of Economics to be prescribed by the Professor.

The first essay on the Immigration of Peoples in some of its social and economic aspects, the prize to be open to an undergraduate taking the B.Ec. course who had completed two years' work.

A letter was received from Acting-Professor Dodd, conveying a request received from the Advisory Council of Science and Industry asking him to take control of certain scientific research work connected with cattle tick. It was resolved to grant the permission asked.

The following appointments were made:—

(1) On the recommendation of the Dean of the Faculty of Law, for the vacant lectureship in the Law of Procedure, Pleading and Evidence: Mr. D. S. Edwards, B.A., LL.B.

(2) On the recommendation of the Dean of the Faculty of Medicine, for the position of lecturer and chief demonstrator in the Department of Physiology: Mr. H. Priestley, M.D., Ch.M.

Certain lectureships falling vacant on the 31st of December, 1917, were filled by the following appointments:—

(1) On the recommendation of the Dean of the Faculty of Law: The Law of Equity, Probate, Bankruptcy and Company Law, Mr. F. R. Jordan, B.A., LL.B.; the Law of Status, Civil Obligations and Crimes, Mr. E. M. Mitchell, B.A., LL.B.; Roman Law, Dr. G. W. Waddell.

(2) On the recommendation of the Dean of the Faculty of Medicine: Public Health, Mr. W. G. Armstrong, B.A., M.B., Ch.M.

The Honourable Mr. Justice Street and Mr. H. C. L. Anderson were appointed *ex officio* members of the Council of the Women's College.

A report on the place to be occupied by the Japanese language in the University curriculum was adopted.

A meeting of the Senate of the University of Sydney was held on September 4, 1917, at the University.

A cable message was received from the Agent-General for New South Wales in London, notifying that November 1, 1917, had been fixed as the last day for receiving applications for the Chairs of Zoology and Architecture.

A letter was received from the Australian Town Planning Conference and Exhibition, to be held in Adelaide October 17 to 24, 1917, asking for delegates to be appointed by the University. It was resolved that Messrs. John Sulman, J. J. C. Bradfield and James Nangle be nominated to represent the University.

On the recommendation of the Dean of the Faculty of Medicine, Dr. John Macpherson was appointed examiner in Materia Medica.

THE AUSTRALASIAN TRAINED NURSES' ASSOCIATION.

The Annual Meeting of the Australasian Trained Nurses' Association was held in Sydney on August 1, 1917. In presenting the annual report, Dr. St. John Dansey, the President, paid a high tribute to the work of the nurses on military duty with the Australian Imperial Force. He referred to the criticism which had been levelled against the four years' course of training, and showed that in the chief training schools in Great Britain four years was regarded as essential. He referred to the valuable services which Miss M. E. Garran had rendered to the Association as Secretary, and expressed much regret that she had been compelled to resign her position.

From the annual report it is seen that the membership of the Association stands at 4,705. There are 1,867 general nurses, 1,052 obstetric nurses (including 205 of the general nurses), and 37 mental nurses (including 7 on another register) in New South Wales. In Queensland there are 864 members, in South Australia there are 365, in Western Australia there are 346, and in Tasmania 295. At the two examinations held in New South Wales, 352 candidates presented themselves, and 23 failed to pass the necessary examinations. During the course of the year, 1,117 members of the Australasian Trained Nurses' Association were engaged on military duty.

Reference is made to a Bill for the State Registration of Nurses, which had been sent to the Council for comment. The Council hold the opinion that the present time is inop-

portune for the introduction of State registration, on account of the shortage of nurses caused by the war.

The obstetric nurses in New South Wales have determined by plebiscite that the fees for obstetric cases should be raised to £3 3s.

The annual report was adopted. Dr. Archie Aspinall was elected Honorary Secretary, in the place of Dr. McKelvey, who, in his turn, was elected to the seat vacated by Dr. Aspinall on the Council.

Mr. H. E. Budden, the Commissioner of the War Chest Fund, and Lieutenant-Colonel H. S. Stacy delivered entertaining addresses to the meeting.

Naval and Military.

The 336th and 337th lists of casualties sustained by members of the Australian Imperial Force were issued on September 10, 1917. The two lists contain 1,720 names. In the former, there is an official notice of the fact that Colonel Cecil Lucas Strangman and Major John Wellesley Flood are missing. In our issue of August 18 (page 146) we announced that these two officers were passengers on board the s.s. *Matunga*, which has not been heard of since August 5, 1917. In the 336th list it is announced that Captain Edward Stanley Smallpage was wounded, but was remaining on duty, and in the 337th list the same officer is reported to be wounded, "second occasion, previously reported returned to duty." Major Joseph Patrick Kenny is reported to be ill for the second time, the previous report indicating that he had returned to duty.

It has been announced that Captain Hugh Kingsley Ward, R.A.M.C., attached 2nd King's Royal Rifles, is a prisoner of war in Germany, and is presumably unwounded. A previous report indicated that Captain Ward had been wounded and was missing since July 10, 1917.

Major Lyle Wilfred Bond, of the 8th Field Ambulance, has been awarded the Distinguished Service Order for conspicuous gallantry and devotion to duty. When in charge of advanced collecting and forwarding posts his total disregard of danger under a terrible hail of gas shells, high explosives and shrapnel fire, gained him the confidence of all ranks, and greatly assisted the evacuation of the wounded. Later, although wounded and partly gassed, he refused to leave his post, and his bravery and devotion saved a very critical situation.

Major Herbert Percival Brownell has been awarded the Distinguished Service Order for conspicuous gallantry and devotion to duty while attending to the wounded under heavy fire. His coolness in organizing matters amidst the greatest confusion enabled the wounded to be expeditiously treated, and he personally treated some hundreds of cases under heavy shell fire.

Major Horatio Victor Patrick Conrick, of the 7th Field Ambulance, has been awarded the Distinguished Service Order for conspicuous gallantry and devotion to duty in attending to the wounded. He proceeded to the scene of an explosion under very heavy shell fire and personally directed the removal of the wounded. His fearlessness and disregard for his personal safety have been marked on all occasions.

Captain Charles Herbert Leedman, A.A.M.C., Regimental Medical Officer attached to the 54th Battalion, has been awarded the Military Cross. Although he and several of his staff were wounded by the heavy shelling of his post by the enemy, he continued, with the greatest gallantry, to attend the wounded, remaining at his post until it became untenable.

Captain Cyril Charles Minty, A.A.M.C., has been awarded the Military Cross. He showed the greatest courage and fearlessness in attending the wounded whilst exposed to heavy shell fire and gas fumes, and assisted to carry them to the collecting post. The stretcher-bearers had suffered severe casualties, and it was owing to his magnificent example that they maintained their courage and endurance.

Captain Keith Shelley Parker, A.A.M.C., has been awarded the Military Cross. The details are not yet available.

Dr. W. Kent Hughes is reported to have been appointed Surgeon-in-Chief at the Anglo-Russian Hospital in Petrograd.

It has been announced that Colonel Rupert Major Downes has been appointed Deputy Director of Medical Services with the British Forces operating at Gaza. No notification has yet been published that this appointment would remove Colonel Downes from the Australian Army Medical Corps.

Public Health.

NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the week ending September 1, 1917:—

	Metropolitan Combined District.		Hunter River Combined District.		Rest of State.		Total.	
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.
Enteric Fever	4	0	0	0	0	1	4	1
Scarlatina	22	1	0	0	9	0	31	1
Diphtheria	36	0	1	0	29	1	66	1
C'bro-Sp'l Menin.	0	0	0	0	1	2	1	2
Poliomyelitis	0	0	0	0	1	0	1	0
*Pul. Tuberculosis	26	12	2	0	0	0	28	12

* Notifiable only in the Metropolitan and Hunter River Districts, and, since October 2, 1916, in the Blue Mountain Shire and Katoomba Municipality.

VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending September 2, 1917:—

	Metropolitan.		Rest of State.		Total.	
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.
Diphtheria	32	0	34	0	66	0
Scarlatina	24	0	18	0	42	0
Enteric Fever	0	0	1	0	1	0
Pulmonary Tuberculosis	26	7	13	2	39	9
C'bro-Spinal Meningitis	1	—	0	—	1	—

QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending September 1, 1917:—

Disease.	No. of Cases.
Diphtheria	28
Malaria	2
Scarlatina	8
Pulmonary Tuberculosis	9
Puerperal Fever	1
Enteric Fever	1
Erysipelas	3

SOUTH AUSTRALIA.

The following notifications have been received by the Central Board of Health, Adelaide, for the week ending August 25, 1917:—

	Adelaide.		Rest of State.		Totals.	
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.
Pertussis	0	0	19	0	19	0
Diphtheria	2	0	12	2	14	2
Pulmonary Tuberculosis	1	1	9	3	10	4
Morbilli	1	0	3	0	4	0
Scarlatina	0	0	3	0	3	0
Favus	0	0	3	0	3	0
Enteric Fever	0	0	2	0	2	0
Puerperal Fever	0	0	2	0	2	0
Erysipelas	0	0	1	0	1	0
Cerebro-Spinal Fever	0	0	1	0	1	0

WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, during the week ending August 18, 1917:—

	Metropolitan. Cases.	Rest of State. Cases.	Totals. Cases.
Diphtheria	12	7	19
Scarlatina	2	1	3
Pulmonary Tuberculosis	8	5	13
Erysipelas	2	0	2
Septicæmia	2	0	2

TASMANIA.

The following notifications have been received by the Department of Public Health, Tasmania, during the week ending August 4, 1917:—

Disease.	Hobart. Cases.	Launceston. Cases.	Country. Cases.	Whole State. Cases.
Pulmonary Tuberculosis	1	0	0	1
Enteric Fever	1	2	0	3
Puerperal Fever	1	0	1	2
Diphtheria	2	6	9	17

INFECTIVE DISEASES.

The Bulletin of the Quarantine Service, issued on August 17, 1917, contains the following information:—

Variola.

During the period between August 3 and August 17, 1917, 15 cases of variola were notified in New South Wales. In the Dutch East Indies there were 11 additional cases, with two deaths. One case of varioloid occurred in the Philippine Islands during the first fortnight of July.

Plague.

Six fatal cases of plague were reported during the first week of July in Hong Kong. In the Straits Settlements there were two fatal cases during the first fortnight of August. Information concerning three fatal cases has been received from Java since the publication of the last Bulletin. The last case of rat plague at Paauhau, in Hawaii, occurred on July 15, 1917, while the last human case occurred at the same place on June 23, 1917.

Cholera.

During the period from July 8 to July 14, 1917, there were 496 cases of cholera and 328 deaths in the Philippine Islands. Four additional cases, with two deaths, have been reported in the Dutch East Indies.

Typhus.

The distribution of typhus during the period from June 23 to June 29, 1917, is given by the United States Public Health Service as follows:—

Place.	Cases.	Deaths.
Russia	44	—
Egypt	36	10
Java	13	3
Turkey in Asia	2	—
British Guiana	—	3

Fumigation of Food with Hydrocyanic Acid Gas.

The Queensland Government Analyst has exposed fresh beef and butter in an air-tight box to hydrocyanic acid gas in a dilution of 0.33 vol. %. The food was left in contact with the vapour for 18 hours. After removal from the box, the butter was found to be free from traces of cyanide, and the flavour and taste were unimpaired. The meat gave a slight reaction for cyanide, which disappeared completely in one hour at room temperature. The flavour and appearance of the meat were not affected.

THE HEALTH OF QUEENSLAND.

The Medical Journal of Australia is too small to allow of the prompt publication of articles dealing with important reports on matters concerning the public health. During the past six months its space has been claimed, week by week, by other more urgent material, and a large number of valuable reports have been excluded. Among these, the Annual Report of the Commissioner of Public Health, Queensland, for the year ending June 30, 1916, has failed to secure a place.

Vital Statistics.

The Commissioner starts his account of the year's work by giving a summary of the vital statistics, and by comparing them with those of other countries. The crude birth-rate for the year 1915 was higher in Queensland than in any other country. It was 29.35 per 1,000 of population. The next highest recorded was that of the German Empire, which stood at 28.3 in 1912, while that of the Netherlands was 28.1 in 1913. The lowest recorded was that of France, which was 19.0 in 1913. In a similar manner, the Commissioner shows that the death-rate in Queensland compares favourably with the death-rates in other parts of the world. In 1915 it was 11 per 1,000 of population in Queensland; in 1913 it was 13.7 in England and Wales, 15.5 in Scotland, 17.1 in Ireland, and 17.1 in France. In 1912 it was 18.2 in Italy. The infantile mortality was also lower in Queensland than in other countries, the rate for 1915 being 64.33 per 1,000 births. The highest recorded infantile mortality rate was in the German Empire, *viz.*, 147 in 1912. The comparative figures from foreign countries, should, however, not be set up side by side with the figures for Australian States, in view of the fact that in several instances still-births are included in the death returns.

Infective Diseases.

The Commissioner deals with the provision of hospital treatment for cases of notifiable infectious diseases contained in Section 117 of the Health Act, 1900, 1911. The local Councils are required to bear the cost incurred in this treatment, and it is held that this financial responsibility will act as an inducement for them to take the necessary measures to check the spread of these diseases.

Enteric fever was prevalent at Townsville, Toowoomba and Barakula. The Medical Officer of the Townsville Council attributed the spread, in part, to the inefficient way in which the sanitary contract had been carried out. The Commissioner suggests that the only safeguard against neglect, either of night-soil and garbage disposal or of the sanitary arrangements of individual dwellings, would be to place more power in the hands of the local Sanitary Inspector. He urges all local authorities to appoint a certified Sanitary Inspector, who would be directly responsible to the Commissioner of Public Health. He also deals with the subject of preventive inoculation, and points out that advantage had been taken by one Council of the offer of the Department to supply vaccine free of cost.

He reports a considerable diminution in the incidence of diphtheria. An endeavour was made to detect "carriers" among school children, in which the assistance of the Department of Public Instruction was freely given. Diphtheria regulations have been in force in several areas, apparently with good results.

A short paragraph dealing with tuberculosis contains some details of the work of the Staff Nurse, who visits the houses of patients, after notification, in the metropolitan area. He advocates the establishment of a central depôt.

During the year 1915-1916 malaria was added to the list of notifiable infective diseases. Regulations were issued, imposing on the local authorities the duty of employing means to exterminate mosquitoes.

Brief reference is made to the outbreak of cerebro-spinal meningitis, which was largely limited to the metropolitan area. The Health Officer, Dr. J. E. Thomson, gives an account of this epidemic, and deals with the ætiology of the disease in the course of his report.

Venereal Diseases.

The control of venereal diseases is dealt with apart from that of other infective diseases. During the period covered by the report, the endeavour to check these affections was governed by the Section of the Health Acts, 1900-1911, and the Enthetic Diseases Regulation, 1913. We have already dealt with this matter in connexion with the Health Act (Amendment) Act, 1917. The Commissioner deals with some of the defects of the legislation existing at that time, many of which have been remedied in the amending Act. He raises the question of the legal definition of a prostitute, but does not suggest any satisfactory solution to the difficulty. The definition included in the amending Act is not likely to remove the difficulties experienced in the past.

The Medical Officer of the Enthetic Diseases Dispensary publishes a short report as an appendix.

Leper Lazaret.

The average number of inmates in the Lazaret at Keel Island was 44. There were 28 black persons and 26 white. The number of deaths during the year was six, and, in addition, two males and one female were discharged as cured. There were six new cases. The Health Officer speaks highly of chaulmoogra oil "as a curative and specific remedy."

Food Control.

The work of food inspection is stated to have been satisfactorily conducted during the year. The Commissioner reports that there had been a general improvement in the clean handling and protection of food, and in the proper labelling. The requirements of the food and drug regulations were enforced, and a vast improvement resulted in the proper labelling of food stuffs. In an appendix containing the report of the Chief Food Inspector, details of the result of the inspection, and of prosecutions, are given. The Commissioner points out that a regulation prohibiting the carrying of water in milk carts was gazetted during the year, for the purpose of lessening the amount of adulteration of milk. New standard food and drug regulations were under consideration.

Sanitary Administration.

Under the heading "Plague and Rat Destruction and Sanitary Administration," the Commissioner points out that Queensland had been exempt for many years from plague. Strict supervision was being kept at the ports by the Quarantine authorities, and measures were adopted to destroy rats and mice, and to render buildings rat-proof. During the course of the year, 39,207 rodents were killed. Close on 10,000 rats were examined for plague infection, but all the cadavers were found to be free. The departmental gang and various contractors have undertaken a considerable amount of work for the purpose of protecting premises from the inroads of rodents. The Chief Sanitary Inspector appends a special report dealing with the supervision over the sanitary services, the clearing up of unhealthy areas, and the control of disposal depôts, etc. The appendix is well illustrated with photographs of insanitary areas and premises, while the means adopted to improve this state of affairs are recounted in the letter-press. A considerable amount of work has been undertaken in connexion with the sanitary inspection of military camps.

The Northern Office.

The abolition of the Northern Office is dealt with briefly. The Commissioner records the transference of two Inspectors from Townsville to Cairns and Rockhampton. He expresses the opinion that by allotting districts under the control of the three Inspectors at Townsville, Cairns and Rockhampton, a considerable saving of time and money has been effected, and the work was more expeditiously carried out. We have already dealt with this question in *The Medical Journal of Australia*.

The Laboratory of Microbiology and Pathology.

Dr. J. J. Harris, the Director of the Laboratory of Microbiology and Pathology, publishes a short appendix on the work conducted by him and his staff during the year. In addition to a considerable amount of bacteriological diagnosis of work, he reports that there was a slight decrease in the number of vaccines prepared. He states that bilharzia had been imported from Egypt, and expresses the opinion that it will, in all probability, find means in Queensland to carry on its life-history. A considerable amount of work was conducted in connexion with foods and the standardization of disinfectants.

The Commissioner concludes his report with an account of the changes in the personnel of the staff, a list of the officers serving the Empire at the front, and some general information.

Vital Statistics.

SOUTH AUSTRALIA.

The vital statistics of South Australia for the months of May and June, 1917, have been published for public information. During the month of May 956 births were registered, and during the month of June 1,088. The birth-rate, expressed as an annual rate, in May was 25.4 and in June 30.24 per 1,000 of population. The birth-rate in May was lower than that of the corresponding month in any of the preceding five years, while that in June was higher than the average, and was only exceeded in 1914.

There were 351 deaths recorded in May and 404 in June. The equivalent death-rate was 9.72 for May and 11.28 for June. The average death-rate for the month of May from 1912 to 1916 was 11.04, and for the month of June was 10.68. In May there were deaths of 51 infants under one year of age, and in June there were 52. The infantile mortality in May was 53.03 per 1,000 births, and in June 47.78. In May 31 persons over 80 years of age died, and in June 52. In regard to the causes of death, the following information covers the period of both months. There were 133 deaths due to cardio-vascular diseases, including 97 from acute and chronic diseases of the heart, and 36 from cerebral hæmorrhage. Of the infective processes, tuberculosis caused 72 deaths, pneumonia caused 39, diphtheria caused 21, diarrhœa and enteritis caused 19, bronchitis caused 16, meningitis caused 9, pertussis caused 5, enteric fever caused 4, influenza caused 3, acute nephritis caused 2, acute endocarditis caused 2, non-puerperal septicæmia caused 2, and acute rheumatism, dysentery and puerperal septicæmia caused one each. There were 66 deaths from cancer and 37 from Bright's disease. Ten deaths were ascribed to diabetes.

The statistics for the city of Adelaide, as usual, are appended separately. During the month of May there were 79 births, and during the month of June there were 77. The birth-rate, expressed as an annual rate, was 23.88 in May and 23.26 in June. This rate is lower than that of the corresponding months of the previous four years. In 1912 the rate in May was just below that of May, 1917, while the rate in June was slightly higher than that of June, 1917.

The total number of deaths registered in May in the city was 84. Of these, 54 were of persons usually resident in Adelaide. The corrected death-rate was equivalent to an annual rate of 16.32. In June 86 deaths were registered, including 53 of persons usually resident in the city. The equivalent annual death-rate, corrected, was 16.08.

BRISBANE.

During the month of July, 1917, 243 persons were born and 97 died in the metropolitan area. The number of births was 50 more than the number registered in July of 1916. The birth-rate, expressed as an annual rate, was 33.6. The number of deaths was 40 less than the number registered in July, 1915. The death-rate, expressed as an annual rate, was 12.48. The birth-rate was nearly twice as high in the city of Brisbane as in the suburbs, and the death-rate was nearly three times as high in the city as in the suburbs. Of the 175 persons who died, 28 were infants under one year. The infantile mortality was 59.4.

Diseases of the cardio-vascular system caused 40 deaths, including 27 of organic diseases of the heart and 8 of cerebral hæmorrhage. There were 11 deaths from tuberculosis, 6 from diarrhœa and enteritis, 4 from pneumonia, 4 from acute bronchitis and 4 from chronic bronchitis, 2 from syphilis, 2 from acute rheumatism, 2 from broncho-pneumonia, 2 from acute nephritis and 2 from septicæmia, and one each from diphtheria, erysipelas, varicella, tetanus and non-puerperal septicæmia. There were 18 deaths from cancer and 17 from Bright's disease.

Special Correspondence.

(By Our Special Correspondent.)

LONDON LETTER.

The Rede Lecture.

Sir R. T. Glazebrook, Director of the National Physical Laboratory, delivered the Rede Lecture at Cambridge on June 9, 1917. He commenced by pointing out that very

early in the war some people realized that science was to be an important factor in success, and he reminded the audience of a few of the methods in which scientific investigation had aided our cause. He proceeded to say that a distinction was often drawn nowadays between pure science and industrial science. The step between the University laboratory and the works laboratory was a long one. Discoveries did not leave the man of science in a form which could be at once assimilated by the engineer, the shipbuilder, or the manufacturer. Some means were needed to make them available to such men to secure the advantages which came from the growth of knowledge, by which alone they might keep in the forefront of their trade.

He then outlined the work carried on at the National Physical Laboratory. He did not advocate that such work as that should, as a rule, find a place in a University laboratory, but a University had its own task in connexion with physical laboratories which, he was convinced, were a necessity if science was to be freely applied to industry. The Universities and technical schools must provide and train the staff, not in the application of science, but in methods of investigation, in the knowledge of scientific truths, in the power of observation, the capacity to interpret the observations they make and the experimental results they obtain, and, above all, in the desire to discover the truth and apply the consequences fearlessly to their daily work.

With reference to the study of Greek, Sir Richard Glazebrook declared that it was a problem which the University must attack at once. "I have," he said, "already pointed out what seems to me the first step towards its solution. Cambridge must open her doors wide to every son of our great Empire who can show that he will reap benefits from studying within her walls any branch of knowledge for which she offers opportunities; this step should be taken without delay. Lord Bryce has indicated the lines for our future development; let me briefly outline how they appear to me to run. The University must remain the home of ancient learning, but the course pursued to secure this end must not be such as to demand that Latin and Greek should remain the principal part of the school tasks of all boys. It must train men to be foremost in all walks of life, and not least in industrial pursuits, and this not by undertaking the technical training of the men who go out hence into the world, but by laying a broad foundation of the scientific principles and laws on which technical knowledge, be it theology, medicine or law, or of the more modern branches of applied science, must rest. And, lastly, but most important of all, it must produce the leaders in every branch of science."

Medicinal Glycerine Restrictions.

The Ministry of Munitions announces that, owing to additional demands for glycerine for war purposes, it has become necessary to place further restrictions on the issue of medicinal glycerine, and that the supply in future will be reserved for the manufacture of the preparations of the British Pharmacopœia, and for such uses of special importance as may be sanctioned by the Ministry of Munitions. These supplies will, however, be small, and must be used with the utmost economy. Applications for permit to obtain such supplies should give the following particulars:—(1) Quantity applied for; (2) stock of glycerine held; (3) purpose for which it is required; (4) applicant's average yearly consumption of glycerine for above purposes; (5) name and address of proposed suppliers. The medical profession have been informed of the need for economy in prescribing glycerine, and it is anticipated that the requirements for dispensing will be greatly reduced. The stock of glycerine in the hands of pharmacists should be sufficient to meet these reduced requirements, and, therefore, no glycerine will be issued for dispensing in the meantime. The surplus stocks held by pharmacists and all stocks held by retailers who are not in a position to use them for these restricted purposes should be disposed of either to other pharmacists who are short of stock, or to wholesale houses for making B.P. preparations.

The Limitation of Cakes and Pastries.

A new order from the Food Controller, issued on April 18, 1917, will bear severely on those to whom afternoon tea is almost the most important meal of the day.

The order prohibits the making of light pastries, muffins, crumpets, tea cakes, ornamented cakes, fancy bread.

On the other hand, it permits the making of cakes, buns, scones and biscuits.

But, in the making, the baker must conform to certain requirements as to the amount of sugar and of wheaten flour which may be used. The percentage of sugar allowed is, in the case of cakes and biscuits 15%, in the case of buns 10%. No sugar may be used for scones. Not more than 30% of wheaten flour is allowed to be used in cakes, and 50% in buns and scones.

The order precludes the addition of any substance to a cake in baking, or after it has been baked.

Prohibited articles may not be made after Saturday, or sold after Tuesday, but cakes and biscuits made before April 23 may be sold up to a later date.

The order also rations all tea-shops in respect of breadstuffs and cakes. A public eating-place which is excluded from the Public Meals Order by reason of the fact that it does not charge more than 1s. 3d. for any meal, must not serve a customer between 3 p.m. and 6 p.m. with more than 56 grammes (2 ounces) of bread, cake, bun, etc. This provision, however, does not apply to public eating-places which limit to 6d. the maximum price chargeable for any meal not containing meat, fish and eggs served between the hours mentioned.

The Work of the London Hospitals.

The reports for the year 1915 prepared and recently issued by Mr. H. B. Maynard, the Secretary to King Edward's Hospital Fund for London, conveys the information that 109 hospitals within the metropolitan area have supplied detailed statements concerning the work in which they are engaged. These hospitals provided last year a total of 10,942 beds in average daily occupation. The number of in-patients admitted was 157,510, while 1,333,706 persons attended at the out-patients' department. Of the in-patients 28,654 were naval or military men, or nearly 22% of the total average of occupied beds. In 1915 there was an increase of 1,176 in the number of beds compared with 1913, and the total ordinary expenditure amounted to £1,342,127. Towards this outlay the receipts from the authorities in aid of the expenditure on naval and military patients amounted to £150,920, or just over 11% of the total ordinary expenditure, leaving £1,191,207 to be met out of the normal resources of hospital revenue. As the total ordinary expenditure in 1913 was £1,142,938, the voluntary hospitals of London had to meet, as compared with the year before the war, an additional working expenditure of £48,269. The cost of drugs and provisions has continually risen, while the difficulties of staffing hospitals have been very largely increased owing to the urgent call for the services of physicians, surgeons and nurses with the naval and military forces.

National Health Insurance.

Having considered certain amendments in the financial scheme of the National Insurance Acts, the Departmental Committee have issued the final report. They say that it is clear that the standard prescribed by the Act in 1911 with regard to sickness should no longer stand, and that to prevent an unreasonable exercise of the right to initiate enquiries, the Insurance Commissioners should first assure themselves that such enquiries were justified. The Committee recommend that societies should make such alterations in their rules as would include sickness caused by venereal disease among those cases which receive benefits. The report points out that a national scheme, liberally contributed to out of public funds, has already been established for the treatment of both insured and uninsured persons, and the Committee does not therefore consider that approved societies should be called upon to assist substantially in furthering the national scheme. They have it in their power, however, to assist greatly in facilitating the promotion of useful experiments in the larger field of public health.

Correspondence.

THE MEDICAL PROFESSION AND THE LODGES.

Sir,—Is it now too late to run through in review some points bearing on what seems inevitable in the difference of opinion between our profession and the Friendly Societies of Victoria?

I was present some few weeks ago at a small suburban meeting of our members, which had been convened ostensibly in the interests of organization. All of us practising in the district had been duly notified a few days before, and the hour fixed for 8.30 p.m.—a time when the vast majority of medical men are quite free to attend to any business in which they are intimately concerned.

We waited until 9 p.m., when there was less than 50% of members present, and, of these, only one was really vitally interested in the lodge question!

Three had no lodge appointments at all, and two (one of whom was myself) had only trifling lodge connexions.

Three men with very large contract practices were all conspicuous by their absence. I was hoping to hear their views on the matter, but was disappointed. A member from Richmond addressed the meeting at some length, and (I think) in the capacity of one of the executive in the coming "strike." I have noted, by close attention to the medical journal, that the same member has been most consistently prominent in advocating radical methods of procedure, while numerous others have been half-hearted, or even frankly antagonistic to these methods.

The meeting was absolutely "lifeless," and the only talk I heard, apart from that of the above mentioned speaker, indicated either dislike of the "strike" idea, or else fatalistic abandon. Now, what I wish to know is, Do the medical profession of Victoria as a body desire to "strike" as a means of gaining their rights in the lodge matter, or are we weakly allowing ourselves to be pushed into it by a few agitators?

In the latter case we come directly into line with the workers in industrial disputes existing now—and it is not a pleasant thought!

Mind, I am in no doubt whatever as to the justice of our claim; for years we have been sweated and imposed upon by the Friendly Societies, and it has to end some time or other.

But are we right in the step we are anticipating now? First, I must be assured that the vast majority of men doing contract practice (and no other men should be consulted) really desire it. The only means of finding this out is by a "secret ballot"—there must be no moral terrorism to sway a man's decision.

This ballot should be held at once, and no man not holding lodge contracts should have a vote at all. To me this seems a most vital point.

We have seen and heard far too much lately of the noisy and assertive agitator getting his own way, while the "sheep" meekly do as they are told.

If the secret ballot decide against the "strike" weapon, it might be placed as an alternative whether the members are willing to abide by the decision of independent arbitrators, or, should the Societies refuse arbitration, whether the "strike" be contingent only on such refusal. Perhaps the Government might be willing to allow a Supreme Court Judge to weigh the evidence and decide the issue, provided both sides were agreeable. But, should the members show unmistakeably that they desire no arbitration—that they desire to "strike" until they get all their demands (and I should require an overwhelming vote before I personally became reconciled to such an odious idea), then, for goodness sake, let us have an effective "strike," which will give us all we want before the strike is really declared. By this method there will be no suffering and no discomfort whatever, for the public will at once see the absolute impossibility of fighting us, and will yield before we really strike at all.

Of course we shall be despised and held in contumely—but we shall be so in any case if we strike, even ineffectively. So let us be at least successful—for success may justify anything. The public is about tired of "strikes," and already I am beginning to hear the sneers and gibes of a few patients. Now the ideal of a successful "strike," according to the speaker of the other night, was that the medical men should substitute a private contract system with patients, with a paid secretary, and so forth, for the society method.

He painted in glowing terms the gradually increasing fear the lodge executives would display as they watched their members leaving them for their hated rivals—the doctors' private contract lists. How about medicines, funeral benefits, sick pay, smoke nights, trophies, and all the rest of the bag of tricks?

How about the energetic and unscruplous medico battening on his timid and over-scruplous brother practitioner? Of course, we are all angels, only in different degrees!

How about the rotten and nauseating contract system altogether, with its degrading influence on our work and our brains—revitalized by our own hands? Pshaw!

If such a thing as this is permitted by the B.M.A. I shall refuse to have anything further to say in the matter. For God's sake don't let us cut loose from one filthy contract system to enter into another and a worse one! What difference would there be between us and the poor ostracized devil who collects his sixpences every week, and smiles because he is better paid than the men who revile him! No! There is one way only to end a strike before it is really started—and, remember, we are about to fight wealthy organizations—some, such as the A.N.A., with powerful political influence. Probably, even with muddling methods, we should gain a measure of success in time, and be cordially hated, as well as despised.

The "strike" in New South Wales has now lasted for years, and we have all experienced the pleasure (*sic*) of watching the black list on the last page of the *Journal* grow smaller with the lapse of years.

Are we all prepared for a fight lasting years? I think not. For—don't make any mistake—before the lodges agree to the £200 maximum clause they will fight to the death. Either that clause has to go or we have to fight with the gloves off.

On the day that we all resign our lodge appointments, let every medical man in every public hospital in Victoria also send in his resignation, to become effective in three months! There, that's the whole secret—the whole honorary and resident staff resigns in a body, but with three months' notice. It is a beastly method, of course; but the whole thing is beastly, so why not at least let it have the merit of success.

As a matter of fact, it would be kinder, because the position created would be so impossible that there would be no strike at all—we should get our demands.

This puts the axe to the roots of the tree; it cuts off the lodge patient from free hospital treatment also. But there is no need to argue—no need to slobber about the injustice to the suffering poor and the heartless cruelty of the unpaid professional man at the hospitals refusing to do difficult surgical marvels on the great unwashed because the idiotically altruistic profession had a quarrel with the Friendly Societies! No need at all! There would not be a quarrel; it would be over before it had started.

So this is my slogan: (1) Either let there be arbitration. (2) Or let there be a secret ballot, and, if a "strike" is decided on, let it be an effective "strike"!

Yours, etc.,

E. V. ROY HUCKELL.

Toorak Road, South Yarra,
Melbourne, August 25, 1917.

THE PREVENTION OF VENEREAL DISEASE.

Sir,—I note that the following resolution of the Federal Committee was brought up for consideration at the Victorian Branch of the British Medical Association yesterday:

> That it be a recommendation to the Branches to consider whether precautions for the prevention of venereal diseases, which should be taken by those who have exposed themselves to the risk of infection, should be made more widely known.

To my mind there could be no more certain means taken to increase immorality among men and boys than the adoption of such a measure.

Is it suggested that the Government should establish dispensaries at all convenient places where prostitution could be carried on? This truly would be a boon to the prostitutes and to the passions of the male sex!

I do hope that the moral tone of our profession in Australia has not become so degenerate. And it may be you, Mr. Editor, will have a word to say.

Yours, etc.,

RICHARD JONES.

110 Collins Street, Melbourne,
September 6, 1917.

Medical Appointments.

During the absence on leave of Dr. A. A. Brown, Dr. William J. Bird has been appointed Acting Collector of Imposts in connexion with the Greenvale Sanatorium, Victoria.

Dr. Frederick David Jermyn has been appointed Officer of Health, Queenscliff Borough, Victoria, Dr. John Pollock having resigned.

Dr. William Robert Mathews has been appointed Government Medical Officer at Wilcannia, New South Wales, in place of Dr. F. C. Crossie, who has resigned.

Dr. Walter Blake Nisbet has been appointed Acting Government Medical Officer, Townsville, Acting Health Officer, and Acting Medical Officer to the State Children Department, Townsville, Queensland, during the absence of Dr. Ernest Humphry.

The undermentioned medical practitioners have been appointed Medical Referees under "The Workers' Compensation Act Amendment Act of 1916" for the whole of the State of Queensland:—

Francis Henry Vivian Voss, Lic. Soc. Apoth., Lond., Mem, Fell. R. C. Surg., Eng., Rockhampton;

Fred C. Turnbull, M.R.C.S., Eng., L.R.C.P., Lond., Many Peaks;

Malcolm Gillies, M.B., Mast. Surg., Univ. Glasg., Bowen.

Dr. John Hardie Macarthur has been appointed Medical Superintendent, Dunwich Benevolent Asylum, and Superintendent, Inebriate Institution, Dunwich, Queensland.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xix.

Camooweal Cottage Hospital, Medical Officer.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
TASMANIA. (Hon. Sec., Beltive, Tasmania.)	Medical Officers in all State-aided Hospitals in Tasmania.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	Brunswick Medical Institute. Bendigo Medical Institute. Prahran United F.S. Dispensary. Australian Prudential Association Proprietary, Limited. National Provident Association. Life Insurance Company of Australia, Limited. Mutual National Provident Club.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Medical Officers to the Selwyn Hospital, North Queensland. Brisbane United Friendly Society Institute. Warwick Hospital.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	The F.S. Medical Assoc., Incorp., Adelaide.
WESTERN AUSTRALIA. (Hon. Sec., Health Department, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United F.S. Dispensary. Canterbury United F.S. Dispensary. Leichhardt and Petersham Dispensary. M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney. Marrickville United F.S. Dispensary. N.S.W. Ambulance Association and Transport Brigade. North Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Parramatta, Penrith, Auburn and Lidcombe. Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, N.Z.

Diary for the Month.

Sept. 18.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Sept. 19.—W. Aust. Branch, B.M.A., Branch.
Sept. 19.—South Sydney Med. Assoc. (N.S.W.).
Sept. 21.—Q. Branch, B.M.A., Council.
Sept. 25.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.
Sept. 26.—Vic. Branch, B.M.A., Council.
Sept. 27.—S. Aust. Branch, B.M.A Branch.
Sept. 28.—N.S.W. Branch, B.M.A., Branch (Ordinary). Election of two Members of the Federal Committee.
Sept. 30.—Vict. Branch, B.M.A., Last Day for Election of Two Members to Federal Committee.
Oct. 2.—N.S.W. Branch, B.M.A., Council (Quarterly).
Oct. 3.—Vict. Branch, B.M.A., Branch.
Oct. 5.—Q. Branch, B.M.A., Branch.
Oct. 5-6.—N.S.W. Branch, B.M.A., Annual Meeting of Delegates of Local Associations with the Council.
Oct. 9.—Tas. Branch, B.M.A., Council and Branch.
Oct. 9.—N.S.W. Branch, B.M.A., Ethics Committee.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.